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MINISTRY OF AGRICULTURE

MONTHLY REPORT

AUGUST, 1939.

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GOVERNMENT OF NORTHERN IRELAND
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MINISTRY OF AGRICULTURE

MONTHLY REPORT

AUGUST, 1939.

Unsettled weather continues to delay the saving of the hay crop, and it is feared that, as well as being a light crop this season, most of it will be rendered inferior in quality. Whilst the other crops have improved with the moister conditions experienced since June, a return to drier and warmer weather would now be beneficial for crops, and also for live stock. As well as the usual monthly account of agricultural conditions, there is a further brief account of the fruit crop, as at the 1st August, in this issue.

Another article dealing with the progress made under the Milk and Milk Products Acts (Northern Ireland), 1934 to 1938, in the utilisation of milk for manufacturing purposes is printed in this Report on page 225. The numerous tables which form the basis of this article have been compiled from official returns, and provide a most interesting study. There is also an article summarising the provisions of the new Bacon Industry Act (Northern Ireland), 1939. The main provisions of the Wheat (Amendment) Act, 1939, which came into operation last month, have also been summarised on page 245.

AGRICULTURAL CONDITIONS.

AGRICULTURAL CONDITIONS AT 1st AUGUST, 1939.

With the continuance of unsettled weather throughout July, seasonal work on the farm suffered further interference, but the rains greatly benefited the growing crops. In the earlier part of the month conditions were, on the whole, showery, although there were many dry and sunny periods. Later the weather became more unsettled, and very heavy rains, with rather lower temperatures at times, were the rule rather than the exception. The saving of the hay crop was rendered a slow and difficult undertaking by the rains, and although fairly good progress was made in some districts, the work is generally behindhand, and it is feared that the quality of most of the late-saved upland hay and of meadow hay will have suffered in consequence, although some improvement in growth was made following the arrival of the rain in late June. The moister conditions also favoured the rapid development of the other growing crops, and their position is now generally very promising. Pastures, too, made a remarkably good recovery, and the luxuriant growth of wild white clover is an especially good feature of this season's grazing. Keep is abundant everywhere, and generally of good quality where the pastures have been well managed, but a tendency to rankness has been noticeable in some fields, more especially where an insufficient number of animals was grazed.

As indicated, the corn crops have made good growth, and have generally recovered well from the earlier set-backs due to the drought, whilst potatoes grew out vigorously and the foliage is now exceptionally heavy in nearly all fields. Flax made some improvement, and is in a fairly promising state, and of the root crop mangels should yield well, but much less satisfactory accounts have been received concerning turnips. Weeds, however, made considerable headway during the rains as the carrying out of after cultivations was, perforce, neglected to some extent. Among mangels and turnips, therefore, the ground is seriously infested with weeds in many fields. The progress of thinning these crops also was retarded by the rains, as was the digging of second early varieties of potatoes, and the spraying of the main crop as a preventive measure against the outbreak of blight disease.

All classes of livestock made a good thrive on the better pastures and are now showing up well. There have been a few cases of seasonal troubles such as "hoose" and "felon" in cattle and liver-fluke disease, "foot-rot" and "maggots" in sheep, but the incidence of such is rather less noticeable than in previous wet seasons.

There was some improvement in the demand for store cattle last month, but beef prices recorded a seasonal decline. Sheep prices also followed a downward trend, although prime lambs usually held to former levels. It is likely that with a supply of good quality keep being more plentiful than usual at this season of the year there will be more grass-fed fat cattle coming on the markets this autumn than in previous years. Already an improvement is noticeable in the condition of the cattle and sheep being marketed.

At present supplies of home-grown foods are adequate for requirements, but with hay being a light crop this season and oat straw likely to be short, it is feared that the winter season may be a difficult one should weather conditions prove severe. On the other hand, supplies of home-grown grain, mangels and potatoes should be plentiful if these crops are saved under reasonably good conditions.

Purchased feeding stuffs were used to a fair extent last month, more especially for pig feeding, and prices have been more or less steady throughout, although a weaker tendency was exhibited by cereal foods.

With a growing interest being taken in the scheme of grants for the ploughing up of grassland, it seems probable that farmers will be busy during the next two months on the work entailed. In many cases it is learned that farmers intend to take advantage of the Ministry's scheme for land improvement with the object of putting their fields in order before ploughing commences. Further information on the scheme of grants for ploughing up grassland will be found in this Report.

THE CROPS.

WHEAT.—Both winter and spring sown wheat made further improvement in growth during July, with the continuance of the moister conditions following the drought in early summer, and although some fields are still rather thin the general position is now very satisfactory. The crop promises to ripen in good time, and yields are expected to be well up to average.

OATS.—In most districts the oat crop made good progress during last month, the rains giving a timely impetus to growth. In some districts, however, the damper weather came too late and the straw will be rather short; this is especially the case with oats growing on potato ground. This season's crop has suffered little from attacks by leather jacket grubs, wire worms and other pests, although some crops growing on old lea were badly infested in the earlier stages. Some lodging has been caused by the recent heavy rains, but the crop as a whole is standing better than usual. Reports indicate that some early sown plots are already beginning to colour. Good yields of grain are anticipated in most districts, but it seems probable that straw will be generally less plentiful than usual.

Supplies of last season's white oats declined to small dimensions at markets last month. Prices remained fairly steady, and the average quotation was slightly firmer on the month at 5/4¾d. per cwt. Offerings of oat straw were also small and prices were steady, although the monthly average was lower at 37/9d. per ton.

Barley.—Barley, like the other grain crops, benefited from the favourable conditions last month and thick heavy crops are reported from nearly all districts. There have, however, been some partial failures, and lodging has occurred in some crops growing in rich soil areas. It is generally expected that the crop will yield satisfactorily, and that the quality of the grain will be good.

Flax.—This crop made satisfactory growth in most areas last month, but its present state varies considerably from district to district; in some it is in excellent condition, but in others it is very poor. Generally it would seem that the crop is in fairly good condition, and in localities where pulling has commenced the yields of green flax are reported to be up to average. The recent heavy rains have beaten down and tossed many fields of flax, and rendered handling difficult.

Hay.—The unsettled weather last month provided a serious hindrance to haymaking in the later districts, and in some cases it is feared that the quality of the crop will be seriously impaired. In the earlier localities, however, the bulk of the upland hay, and some of the meadow hay was saved under ideal conditions, and the quality is excellent although the yields were abnormally light. The damper conditions since June have resulted in late-mown hay producing heavier crops, but the quality is inferior, as the grasses have become tough and fibrous.

A larger area than usual is being saved for seed this year, as some farmers are anticipating a shortage of grass-seed next season, and in many areas the wet weather prevented the cutting of the hay until the seed was ripe. Most of the seed hay is still in stooks or huts in the fields. The yields of grass-seed are expected to be lower than usual, but the quality should be fairly good.

Fairly steady supplies of hay continued to be marketed during July, and upland hay was dearer at 70/1d. per ton, whilst meadow hay, at Belfast only, cheapened somewhat to 57/- per ton. Increasing quantities of the new season's upland hay were being marketed, and prices ranged from 50/- to 80/- per ton according to quality.

Mangels.—The mangel crop made excellent growth during July, and there is a general promise of a highly satisfactory yield. This, despite the fact that the crop made a poor start during the drought, is still not as far advanced as in a normal season, and that in a few instances where thinning has yet to

be completed the crop may be rather light. The recent heavy rains have retarded after cultivations and some fields are now becoming infested with weeds.

TURNIPS.—The recent rains had a beneficial effect on this crop, but taken all over its condition gives little cause for satisfaction. Many fields were so badly damaged by the drought earlier in the season that second sowings were necessary. Growth is, therefore, still backward and in many cases thinning is still in progress. Some early sowings survived the drought and are now in a promising state, but the bulk of the crop is only fair. The wet weather has hindered weeding and after cultivations, and weeds have made considerable headway among the plants.

POTATOES.—The potato crop developed rapidly last month, and it has fully recovered from the effect of the early drought. The foliage, however, is inclined to be rather too luxuriant in many fields. A spell of drier weather in the immediate future would insure a heavy main crop of good quality tubers.

Blight has as yet caused very little trouble and, although spraying has been hampered to some extent by the inclement weather, the preventive measures have kept the disease well in check. In some varieties, however, virus diseases have been exceptionally severe, and growers should be very careful in avoiding the carrying over of infection in the seed.

Progress with the digging of the early varieties varied considerably throughout the country, and the results have also been somewhat irregular. In most areas lifting began later than usual, and at first the yields were well below average, but recent diggings have been much more satisfactory. Taken all over, however, the yields were considerably lighter than last season's. The quality of the tubers is generally satisfactory. In some areas digging operations were reduced in extent owing to the depressed state of the markets and the falling prices.

The remaining stocks of the old crop are being used up mainly for feeding to pigs and cattle. With the shipping demand remaining dull, the weekly shipments of potatoes recorded a rapid seasonal decline and, compared with a year ago, continued on a smaller scale.

SHIPMENTS TO GREAT BRITAIN.

Week ended	*Tons*	*Week ended*	*Tons*
1st July, 1939	... 1,175	2nd July, 1938	... 814
8th ,, ,,	... 611	9th ,, ,,	... 1,302
15th ,, ,,	... 421	16th ,, ,,	... 696
22nd ,, ,,	... 342	23rd ,, ,,	... 505
29th ,, ,,	... 183	30th ,, ,,	... 200

At the principal markets last month, where supplies are offered for local consumption, last year's main crop varieties gave way to the rapidly increasing quantities of new season's potatoes. The weekly average prices of the new season's early varieties recorded a sharp decline during the month, falling from 8/0¾d. per cwt. in the first week to 3/8½d. at the close.

The monthly average price was 4/9¾d. per cwt., as compared with 17/5¾d. for June, 1939, and 6/1½d. for July, 1938.

Other Vegetables.—Rather lighter supplies of home-grown vegetables were forward at markets last month, and prices generally were easier. Pamphrey cheapened slightly by 1¼d. to a monthly average price of 2/1¾d. per dozen, whilst leeks cheapened by 2d. and parsley by 3¾d. to 7d. and 11¼d. per bunch respectively. Cauliflowers were dearer by 11¾d. on the month at 4/- per dozen. The first supplies of this season's carrots fetched from 4d. to 7d. per bunch.

FRUIT.

Apples.—The first supplies of home-grown apples of the variety Grenadier made their appearance at the Belfast market in the latter half of July. Prices ranged from 16/- to 18/- per 10 stone barrel. With increased offerings at the end of the month, prices cheapened to a range of from 10/- to 12/- per 10 stone barrel. Judging from present tendencies, it seems that supplies may exceed requirements in the near future.

Gooseberries.—Increasing quantities of gooseberries were offered during last month, and prices, which at the beginning of July ranged from 2/- to 2/6d. per stone, cheapened at the close to a range of from 1/- to 1/6d. per stone.

Blackcurrants.—Plentiful supplies of this fruit were available at prices which fluctuated within a general range of from 5/- to 9/- per 12 lb.

Strawberries and Raspberries.—For the irregular supplies of these fruits prices hardened during the month. From 4/- up to 7/- per dozen punnets was obtained for raspberries, whilst strawberries sold at from 6/- up to 12/- per dozen punnets.

Tomatoes.—Supplies of Irish tomatoes cheapened in price during the month, and prices varied from 11/- at the beginning to as low as 3/- per 12 lb. at the close.

LIVE STOCK.

Cattle.—The rapid growth of pastures during last month was reflected in the excellent thrive of store cattle, and their general health and condition are satisfactory. The soft grass, however, resulted in some scouring among the cattle, and a few cases of "hoose" in young animals have been reported.

The offerings of store cattle at fair centres last month were again smaller than in the previous month. Trade opened quietly steady, and improved towards the close of the month. The quotations for the best types were firmer, while poorer animals remained in slow request at previous prices.

The numbers of cattle being fattened on grass now appear to be about normal, and the recent spring of grass, resulting from the moister weather, has caused a marked improvement in their condition.

Supplies of fat cattle at fairs during July were rather below normal dimensions, and very similar to those in the previous month, but at the Belfast marts the offerings were fairly large. The demand for beef cattle weakened during the month, and prices declined.

Dairy cattle are generally in normally good condition and health, but in some districts udder troubles are fairly prevalent. As a rule calving proceeded satisfactorily during the month, and abortion seems to have been less prevalent than usual. The milk yields were generally of about normal seasonal dimensions for the time of year. They were reported to be heavy at the beginning of the month, but inclined to fall away towards the close.

Rather smaller offerings of dairy stock at fairs last month encountered a variable trade, but prices remained fairly steady.

Sheep.—The flocks are reported to be in good health and condition. Most of the lambs made marked progress during last month, but among some flocks, which did not fully recover from the setback due to the drought, with the consequent shortage of grass at the beginning of the summer, there is a good proportion of the lambs still in a store condition. Outbreaks of disease have not been serious on the whole, but liver fluke was causing some trouble, and towards the end of the month warm, showery weather at times increased the incidence of attack by maggots. Foot-rot has not given much trouble as yet.

Fairly heavy supplies of sheep and lambs were offered at fairs and markets during July, and trade was somewhat variable. Prime fat lambs, however, continued to sell readily at fully late rates, but on balance prices for sheep were cheaper on the month.

Wool.—Larger quantities of unwashed wool were forward at markets last month, and prices were firmer at around 8d. per lb. for long, and 6½d. per lb. for mountain. The average quotation for all classes was ¼d. higher on the month at 7¼d. per lb.

Pigs.—Average supplies of sucker pigs were a quiet trade and prices exhibited a weaker tendency. For the variable offerings of brood sows trade was irregular at cheaper rates of from £5 to £10 per head.

In a few districts the supply of pork appears to have been rather in excess of the demand, but on the whole trade was fairly steady throughout last month.

The weekly returns of (1) shipments of live pigs to Great Britain, and (2) purchases of dead and live pigs in Northern Ireland last month are compared hereunder, with corresponding details for 1938 in brackets.

Week ended	(1) Shipments to Great Britain		(2) Bought dead and alive for curing in Northern Ireland.				Total	
			Dead		Alive			
1939								
8th July	1,468	(1,263)	8,089	(9,554)	6,991	(3,801)	16,548	(14,618)
15th ,,	1,197	(1,187)	3,085	(3,923)	3,766	(2,457)	8,048	(7,567)
22nd ,,	1,551	(1,380)	9,795	(10,368)	6,335	(3,689)	17,681	(15,437)
29th ,,	1,302	(1,280)	8,913	(8,348)	5,484	(4,072)	15,699	(13,700)
30 weeks ended 29th July	33,426	(51,415)	239,238	(261,771)	170,210	(91,338)	442,874	(404,524)

Poultry.—The numbers of live poultry on offer at market centres during July were rather heavier than those in the previous month. The prices for hens and chickens were again easier, and hens cheapened by ¾d. to 1/7d. each, while chickens suffered a sharp drop of 6½d. to 2/1¾d. per head. Ducks, however, were ½d. dearer at 2/3d. each. The prices per lb. live weight paid by wholesale merchants eased during the month and ranged as follows:—Chickens, large 6½d. to 8½d., others 5d. to 8d.; hens 4d. to 6d.; ducks and ducklings, 4d. to 7d.

Horses.—Only small numbers of horses were offered for sale last month, but the supplies were generally adequate for the quiet demand. Working horses were quoted at reduced prices of from £25 to £35 per head, with a top of £50 for superior animals, and as low as £15 for inferior types. Older horses also made rather cheaper rates of from £10 to £30 per head. Unbroken colts sold at previous quotations of from £16 to £30 each, whilst foals made prices of from £7 to £15 per head.

DAIRY PRODUCE.

Milk.—The improvement in pasture lands during July, and the consequent increase in milk yields resulted in supplies to the creameries being fully up to normal for the month, although in some instances production fell away towards the close.

The prices paid by creameries for milk delivered during July were similar to those ruling in June, and ranged from 4d. to 5½d. per gallon, the separated milk being returned to the farmer. The rate of equalisation payment for milk

produced in Northern Ireland and delivered to creameries for manufacturing purposes was determined at 0.39d. per gallon for the month of June, 1939, in accordance with the Milk and Milk Products Acts (Northern Ireland), 1934 to 1938.

It should be noted that under the regulations creameries are required to distribute the equalisation payments in accordance with the butter-fat content of the milk received from each supplier.

Butter.—The supplies of farmers' print and lump butter at market centres last month were on a similar scale to those of the previous month. The average prices eased further by ½d. to 1/2d. per lb. in the case of print, and by ¼d. to 1/0½d. per lb. for lump butter.

Eggs.—The quantities of hen and duck eggs marketed at representative centres last month recorded a seasonal decline. The prices as fixed by the Ministry of Agriculture had a slight downward trend in the case of hen eggs, but a firmer tendency was noticeable at the beginning of August, while duck egg prices were gradually marked up during the month. A table of egg prices showing the prices ruling during the six weeks ended 5th August, 1939, together with comparative figures for 1938 appears on page 239 of this Report.

THE FRUIT CROP, 1939.

During the past month apple trees have benefited greatly by the warm wet weather, and the fruit has developed rapidly. Unfortunately, this kind of weather is also favourable to the development and spread of apple scab disease, and in orchards which were not sprayed with Bordeaux Mixture during late June and July, this disease may reduce the value of much of the crop. Many of the orchards, however, were sprayed at this late period and are carrying good crops of clean fruit. The early cooking variety—Grenadier—is now being marketed; the yield, as forecast in an earlier report, is well up to average.

Strawberries have yielded well in many plantations where the majority of the plants are healthy. In others, however, where many of the plants were affected with virus diseases, although there was a profusion of flowers, the crop of berries terminated early and the total crop was very light. During the picking season the weather was favourable for the most part, but towards the end dull wet weather was responsible for some loss of fruit.

Raspberries, gooseberries and black currants fulfilled their earlier promise of good crops, although wet weather affected to some extent the quality of raspberries, and the maggots of the raspberry beetle were troublesome in some districts. American gooseberry mildew was responsible for a small loss in the case of the gooseberry crop.

THE APPLE CROP IN ENGLAND.

The latest estimates of the probable yields of the most important varieties of cooking apples in areas where they are grown extensively for market, as published by the Ministry of Agriculture and Fisheries on 1st August, are shown hereunder.

The following tables show the index figures for the probable yields in 1939 for the principal districts, and comparable figures for 1938, where available, are shown in brackets. The scale on which the index figures are based is as follows:—

81 - 100 = a "full" crop. 41 - 60 = a fair crop.
61 - 80 = a good crop. 21 - 40 = a light crop.
0 - 20 = a very light crop.

Early Cooking.—Cambs. (15) 85; E. Cornwall (55-60) 55; Devon (41) 70; Essex (25) 85; Herefordshire and W. Glos., (25) 80; Kent ("Lord Derby" 30, others 25) 75; Lincs. Holland (20) 75; E. Norfolk and E. Suffolk (45) 75; E. Sussex (25) 75; W. Sussex (20) 75; Wisbech and W. Norfolk, "Lord Derby" (30) 80; (others 20-25) "Emmett" and "Grosvenor" 75; Worcs. Evesham and Pershore Area (55-60) 80.

"Bramley's Seedling".—Cambs. (5) 80; E. Cornwall (55) 45; Devon (20-25) 65; Essex (25) 80; Herefordshire and W. Glos. (10) 70; Kent (15) 70; Lincs. Holland (15) 75; S. W. Middx. (60) 75-80; E. Norfolk and E. Suffolk (30) 75-80; E. Sussex (15) 70; W. Sussex (10) 78; Wisbech and W. Norfolk (10) 70; Worcs. Evesham and Pershore Area (15) 80.

AGRICULTURAL STATISTICS FOR NORTHERN IRELAND, 1938 - 1939.

Preliminary Statement of Acreage under Crops and Grass and numbers of Live Stock in Northern Ireland at 1st June, 1939, with comparative figures for the year 1938. (The figures for the year 1939 are subject to revision).

CROPS AND GRASS.

	1939	1938	Increase		Decrease	
	Acres	Acres	Acres	%	Acres	%
Corn Crops :						
Wheat	2,928	5,521			2,593	47.0
Barley	3,493	3,430	63	1.8		
Oats	291,331	296,526			5,195	1.8
*Mixed Corn	437	—				
Rye	249	255			6	2.4
Beans and Peas ...	344	442			98	22.2
Total extent under Corn Crops	298,782	306,174			7,392	2.4
Green Crops :						
Potatoes	115,077	123,483			8,406	6.8
Turnips	23,429	26,345			2,916	11.1
Mangels	1,138	1,047	91	8.7		
Carrots and Parsnips ...	522	443	79	17.8		
Cabbage	1,196	1,572			376	23.9
Other Green Crops ...	1,376	1,330	46	3.5		
Total extent under Green Crops	142,738	154,220			11,482	7.4
Flax :	21,197	20,532	665	3.2		
Fruit :	8,056	8,038	18	0.2		
Total extent under Corn and Green Crops, Flax and Fruit	470,773	488,964			18,191	3.7
Hay :						
Rotation	212,146	210,016	2,130	1.1		
Permanent Meadow ...	223,267	220,721	2,546	1.2		
Total extent under Crops	906,186	919,701			13,515	1.5
Pasture :						
Rotation	353,105	396,708			43,603	11.0
Permanent	1,218,314	1,167,218	51,096	4.4		
Total extent under Crops and Pasture	2,477,605	2,483,627			6,022	0.2

* Mixed Corn not collected as such in 1938, and was included in Corn Crops.

LIVE STOCK.

	1939	1938	Increase		Decrease	
	No.	No.	No.	%	No.	%
Cows in milk ...	204,647					
Cows in calf but not in milk	32,318	229,262	15,707	6.9		
Heifers in milk ...	8,004					
Heifers in calf ...	24,716	30,085			5,369	17.8
Other Cattle—						
Two years and over	89,399	89,553			154	0.2
One year and under two	190,381	190,972			591	0.3
Under one year ...	203,563	192,058	11,505	6.0		
Total Cattle	753,028	731,930	21,098	2.9		
Ewes kept for breeding	402,715	401,850	865	0.2		
Other Sheep—						
One year and over ...	54,792	58,773			3,981	6.8
Under one year ...	437,105	432,808	4,297	1.0		
Total Sheep	894,612	893,431	1,181	0.1		
Sows kept for breeding	63,197	57,886	5,311	9.2		
Other Pigs—						
Five months and upwards ...	91,753	84,176	7,577	9.0		
Two months and under five ...	255,458	230,393	25,065	10.9		
Under two months ...	216,716	189,044	27,672	14.6		
Total Pigs	627,124	561,499	65,625	11.7		
Goats and Kids ...	34,650	34,748			98	0.3
Horses used for agricultural purposes ...	75,540	80,012			4,472	5.6
Unbroken Horses—						
One year and upwards	8,534	7,256	1,278	17.6		
Under one year ...	4,650	4,754			104	2.2
Mules and Jennets :	183	181	2	1.1		
Asses :	7,230	7,330			100	1.4
Turkeys	405,329	456,214			50,885	11.2
Geese	104,256	113,169			8,913	7.9
Ducks	414,906	424,563			9,657	2.3
Ordinary Fowl ...	9,289,696	9,199,092	90,604	1.0		
Total Poultry ...	10,214,187	10,193,038	21,149	0.2		

THE CROPS.

The small decrease in the area under corn crops amounting to 7,392 acres, is accounted for by the considerable reduction in the wheat acreage owing to the inclement autumn weather making it impossible in many cases to get winter wheat in. In the case of oats there is a small decline of 5,195 acres (1.8 per cent.) from the high level of 1938, when the area under this crop

increased by approximately 40,000 acres under the stimulus of the Oats and Barley Subsidy Scheme. The area of 291,331 acres under this crop is the second highest recorded since 1930. The area under barley increased by 63 acres.

Green crops show a decline of 11,482 acres compared with 1938. Of this, 8,406 acres is accounted for by the fall in the potato acreage, and 2,916 fewer acres of turnips. Small increases were recorded in the areas returned under mangels, carrots and parsnips, whilst the area of flax also showed a small increase.

The total ploughed area is 470,773 acres, as against 488,964 acres in 1938, but is 20,830 acres greater than the area ploughed in 1937.

The area under hay shows an increase of 4,676 acres since 1938.

There is a decrease in the area under rotation pasture, and a corresponding increase in the area under permanent pasture.

The total area of crops and pasture has declined by 6,022 acres since 1938.

LIVE STOCK.

While the crop area declined since last year, the opposite has happened in the case of the total numbers of live stock, except agricultural horses and young unbroken horses.

There is an increase in the dairy herd of slightly over 10,000 animals, and there has also been an increase in the number of cattle under one year old. The numbers of other cattle show a small decrease of 745. The total number of cattle, which in 1938 had shown an increase for the first time since 1935, shows a further increase of slightly over 21,000 and is now 753,028.

The numbers of sheep show a slight increase of 1,181, and again create a new high record. An increase of 5,162 was recorded in the number of ewes and lambs, while there was a decrease of almost 4,000 in the number of older sheep.

The largest increase is recorded in the pig population, the number being 627,124, as compared with 561,499 in 1938, and is the highest number ever recorded. The number of sows, viz., 63,197, is also a record.

There has been a decrease of 5.6 per cent. in the number of agricultural horses. The probable cause is the replacement by tractors on some of the medium and large-sized farms. The number of tractors in the country at 1st January last was 859. The total number of unbroken horses is 13,184, as compared with 12,010 last year.

There is a decrease in the numbers of turkeys, geese and ducks, and an increase in the number of ordinary fowl. The largest decrease is in the turkey population, the greatest decline taking place in the number of young birds. Ordinary fowl, which constitute over 90 per cent. of the poultry population, show an increase of almost 91,000, the increase being in the number of young fowl. The total number of poultry shows a slight increase of just over 21,000, as compared with 1938, and is now over 10,200,000.

MILK AND MILK PRODUCTS ACTS (NORTHERN IRELAND), 1934-1938.

MILK SUPPLIES FOR MANUFACTURING PURPOSES.

Under the Milk and Milk Products Act (Northern Ireland), 1934, equalisation payments have been paid to all creamery suppliers since the 1st April, 1934, and additional bonus payments have been made since the 16th December, 1934, to producers supplying milk of Grade A, Grade B or Grade C to creameries for manufacturing purposes. In 1936 the Act was amended so as to make the suppliers of prescribed undertakings also eligible for the award of equalisation payments from the 1st April, 1934, and bonus payments from the 16th December, 1934. The Act was further amended in 1937 as a result of which the basic average price for the winter months was raised from 6d. to 6½d. per gallon, and the bonus for Grade C milk was increased from 1d. to 2d. per gallon.

A further amendment of the 1934 Act was made in 1938 so as to provide for the payment of equalisation payment and bonus in respect of milk delivered to a prescribed undertaking (processed milk factory) engaged in the manufacture of milk products other than butter and cream. The following review of the position of the creameries, prescribed undertakings and processed milk factories under the Acts, during the five year period ended on 31st March, 1939, will, it is hoped, provide an interesting and instructive study.

In the following table are given the gallonages of milk delivered to creameries, prescribed undertakings and processed milk factories, for manufacturing purposes, each month during the five years 1934-35, 1935-36, 1936-37, 1937-38 and 1938-39 :—

Month	1934-35	1935-36	1936-37	1937-38	1938-39
	Gallons	Gallons	Gallons	Gallons	Gallons
April	805,332	1,222,022	1,480,684	1,190,143	1,316,817
May	1,465,535	2,440,988	2,590,722	2,348,129	2,282,324
June	2,616,290	3,253,384	3,715,046	3,373,475	3,313,044
July	2,752,354	3,607,191	4,028,679	3,473,975	3,523,026
August	2,696,407	3,255,977	3,467,566	3,110,874	3,486,826
September ...	2,130,802	2,729,203	3,014,723	2,747,016	2,932,123
October	1,879,637	2,240,371	2,540,532	2,225,877	2,339,530
November ...	1,243,755	1,531,638	1,478,766	1,531,425	1,448,900
December ...	895,737	1,140,401	962,790	979,770	1,018,372
January	752,527	1,005,702	795,697	835,978	819,424
February	658,487	899,894	713,311	711,970	716,437
March	864,602	1,106,094	884,779	862,602	956,786
Total	18,761,465	24,432,865	25,673,295	23,391,234	24,153,609
(a) No. of Creameries	(a) 106	(a) 108	(a) 104	(a) 104	(a) 105
(b) No. of prescribed undertakings ...	(b) 2 } 108	(b) 2 } 110	(b) 2 } 106	(b) 2 } 106	(b) 2 } 108
(c) No. of processed milk factories ...	(c) —	(c) —	(c) —	(c) —	(c) 1

It will be noted that the total quantity of milk supplied in 1938-39 showed an increase of more than threequarter million gallons over that supplied in 1937-38, and that the gallonage delivered in August, 1938, viz., 3,486,826, surpassed that for the corresponding month in each of the four previous years.

The position as regards supplies in 1935-36, 1936-37, 1937-38 and 1938-39, as compared with 1934-35, will be more readily appreciated from the following percentage figures :—

Period	Increase in supply as compared with 1934-35.			
	1935-36	1936-37	1937-38	1938-39
	%	%	%	%
Summer months (April-September)	32.42	46.77	30.30	35.19
Winter months (October-March)	25.88	17.18	13.55	15.96
Full Year	30.23	36.84	24.68	28.74

The seasonality of supply is indicated in the following table, in which the monthly gallonages are expressed as percentages of the total supply for the year :—

Month	1934-35	1935-36	1936-37	1937-38	1938-39
	%	%	%	%	%
April ...	4.3	5.0	5.8	5.09	5.45
May	7.8	10.0	10.1	10.04	9.45
June	13.9	13.3	14.5	14.42	13.72
July	14.7	14.7	15.7	14.85	14.58
August	14.4	13.3	13.5	13.30	14.43
September ...	11.4	11.2	11.7	11.74	12.14
October ...	10.0	9.2	9.9	9.52	9.69
November ...	6.6	6.3	5.8	6.55	6.00
December ...	4.8	4.7	3.7	4.19	4.22
January	4.0	4.1	3.1	3.57	3.39
February ...	3.5	3.7	2.8	3.04	2.97
March	4.6	4.5	3.4	3.69	3.96
Total	100.0	100.0	100.0	100.0	100.0

The striking feature of this table is that in each of the five years the supply reached its maximum in July, and fell to a minimum in February. Speaking broadly, about 70 per cent. of the supply was delivered in the summer months, April-September, and 30 per cent. in the winter months, October-March :—

Period	1934-35	1935-36	1936-37	1937-38	1938-39	1934-39
	%	%	%	%	%	%
April—September	66.5	67.5	71.3	69.44	69.78	69.04
October—March ...	33.5	32.5	28.7	30.56	30.22	30.96
Total	100.0	100.0	100.0	100.0	100.0	100.0

In the following table are given the numbers of farmers supplying milk to creameries, prescribed undertakings and processed milk factories each month during the period 1st April, 1934, to 31st March, 1939 :—

NUMBER OF SUPPLIERS.

Month	1934-35	1935-36	1936-37	1937-38	1938-39
April	11,420	14,626	16,818	15,679	15,428
May	13,736	18,152	19,799	18,718	18,301
June	16,936	21,334	22,253	21,056	20,756
July	18,642	21,618	22,987	21,678	21,538
August	18,566	21,571	22,976	21,461	21,608
September ...	17,394	21,260	22,704	21,573	21,548
October ...	17,745	21,081	22,317	21,017	20,982
November ...	16,943	20,117	20,836	19,995	19,362
December ...	15,481	18,382	18,035	17,642	17,195
January	15,266	17,108	15,943	15,421	14,687
February ...	13,652	15,765	14,628	14,200	13,544
March	13,620	15,719	14,627	13,952	13,827
Average for Month	15,783	18,895	19,493	18,533	18,231

It will be noted that the number of suppliers is usually greatest in July and smallest in March.

The average gallonage delivered per supplier each month during the period 1st April, 1934, to 31st March, 1939, was as follows:—

AVERAGE GALLONAGE PER SUPPLIER.

Month	1934-35	1935-36	1936-37	1937-38	1938-39
April	71	84	88	76	85
May	107	134	131	125	125
June	154	152	167	160	160
July	148	167	175	160	164
August	145	151	151	145	161
September ...	123	128	133	127	136
October ...	106	106	113	106	112
November ...	73	76	71	77	75
December ...	58	62	53	56	59
January	49	59	50	54	56
February ...	48	57	49	50	53
March	63	70	60	62	69
Average for Month	99	108	110	100	110

It will be observed that in practically every month of 1938-39 the average gallonage delivered was greater than in 1937-38 (while the monthly average per supplier for 1938-39, viz., 110 gallons, was the same as for 1936-37.

The following table shows the number of suppliers in each county during each month of the year ended 31st March, 1939, together with average figures for the years 1935-36, 1936-37 and 1937-38:—

NUMBER OF SUPPLIERS.

Month	Antrim	Armagh	Down	Fermanagh	Londonderry	Tyrone	Belfast Co. Boro.	Total
April, 1938 ...	2,564	981	405	4,762	885	5,448	383	15,428
May ...	2,933	1,319	484	5,339	1,123	6,709	394	18,301
June ...	3,256	1,627	611	5,776	1,368	7,708	410	20,756
July ...	3,394	1,741	658	5,774	1,452	8,097	422	21,538
August ...	3,426	1,772	661	5,726	1,469	8,173	381	21,608
September ...	3,426	1,811	631	5,692	1,469	8,147	372	21,548
October ...	3,326	1,719	596	5,614	1,397	7,917	413	20,982
November ...	3,000	1,549	526	5,364	1,266	7,271	386	19,362
December ...	2,929	1,266	482	4,673	1,091	6,351	403	17,195
January, 1939	2,697	1,045	348	4,110	806	5,286	395	14,687
February ...	2,591	889	331	3,849	750	4,756	378	13,544
March ...	2,660	878	324	4,076	774	4,709	406	13,827
Average for 1938-39 ...	3,017	1,383	505	5,063	1,154	6,714	385	18,231
Average for 1937-38 ...	2,741	1,379	509	5,386	1,164	7,018	336	18,533
Average for 1936-37 ...	2,705	1,526	679	5,719	1,191	7,367	306	19,493
Average for 1935-36	2,695	1,334	438	5,849	1,118	7,208	253	18,895

It will be seen that approximately two-thirds of the suppliers are in Counties Fermanagh and Tyrone, and that the numbers in these two counties in 1938-39 showed an appreciable decline as compared with 1937-38.

The average gallonage delivered per supplier in each county during each month of the year ended 31st March, 1939, is given in the following table, together with average figures for the years 1935-36, 1936-37 and 1937-38 :—

AVERAGE GALLONAGE DELIVERED PER SUPPLIER.

Month	Antrim	Armagh	Down	Fermanagh	Londonderry	Tyrone	Belfast Co. Boro.	Northern Ireland
April, 1938 ...	120	70	98	66	87	78	224	85
May ...	161	95	124	114	131	113	281	125
June ...	194	125	137	156	158	150	285	160
July ...	194	133	139	160	158	156	283	164
August ...	196	135	144	153	157	155	292	161
September ...	172	112	127	129	135	126	276	136
October ...	149	91	105	105	105	99	257	112
November ...	118	62	80	60	68	63	233	75
December ...	94	49	60	42	49	50	213	59
January, 1939	88	43	65	36	51	45	219	56
February ...	83	41	58	33	46	43	213	53
March ...	103	50	68	49	63	57	246	69
Average for 1938-39 ...	143	91	107	98	109	101	252	110
Average for 1937-38	135	81	99	87	101	93	229	100
Average for 1936-37 ...	140	92	115	101	113	103	245	110
Average for 1935-36 ...	131	89	104	103	106	102	218	108

It is noteworthy that in the case of every county the average figures for 1938-39 showed a marked improvement on those for the previous year.

The following table shows the average prices paid by creameries each month during the period 1st April, 1933, to 31st March, 1938, and also the amount of equalisation payment per gallon paid since the 1st April, 1934 :—

Month	Average price per gallon.						Amount of Equalisation Payment per gallon.				
	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39	1934-35	1935-36	1936-37	1937-38	1938-39
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
April ...	3.79	3.7	3.61	4.19	5.09	5.52	1.3	1.39	.81	.00	.00
May ...	3.26	3.3	3.18	3.80	4.52	5.16	1.7	1.82	1.20	.48	.00
June ...	3.11	3.0	3.11	3.96	4.30	4.74	2.0	1.89	1.04	.70	.26
July ...	3.08	2.8	3.34	4.20	4.44	4.71	2.2	1.66	.80	.56	.29
August ...	3.23	2.9	3.70	4.41	4.64	4.80	2.1	1.30	.59	.36	.20
September	3.72	2.92	4.29	4.42	4.90	4.96	2.08	.71	.58	.10	.04
October ...	3.99	3.01	4.86	4.36	5.79	5.19	2.99	1.14	1.64	.21	1.31
November	4.20	3.34	4.86	4.94	*6.34	5.65	2.66	1.14	1.06	*.16	.85
December	4.37	3.68	5.29	5.32	6.64	6.22	2.32	.71	.68	.00	.28
January ...	4.40	3.95	5.08	5.29	6.31	6.33	2.05	.92	.71	.19	.17
February	4.35	4.06	5.15	5.43	6.25	6.29	1.94	.85	.57	.25	.21
March ...	4.19	4.12	4.87	5.39	5.96	6.00	1.88	1.13	.61	.54	.50
Average for year	3.56	3.18	3.99	4.38	5.12	5.16	2.15	1.33	.90	.35	.33

* For the period 1st—9th November, 1937, no equalisation payments were made, but for the period 10th—30th November, 1937, when the basic average price for the winter months was raised by ½d. to 6½d. per gallon, the rate of equalisation payment was determined at 0.16d. per gallon.

It will be noted that, over the year, the prices paid in 1938-39 were slightly better than in 1937-38.

The numbers of gallons of each grade of milk supplied to creameries, prescribed undertakings and milk factories for manufacturing purposes from 1st April, 1938, to 31st March, 1939, were as follows:—

Month	Grade A.	Grade B.	Grade C.	Grade D.	Total
	Gallons	Gallons	Gallons	Gallons	Gallons
April, 1938 ...	2,558	14,776	676,969	622,514	1,316,817
May	3,047	25,611	1,134,730	1,118,936	2,282,324
June	1,625	29,003	1,499,119	1,783,297	3,313,044
July	1,070	24,104	1,552,647	1,945,205	3,523,026
August	1,187	18,484	1,619,355	1,847,800	3,486,826
September ...	1,230	16,063	1,399,291	1,515,539	2,932,123
October ...	649	9,697	1,168,655	1,160,529	2,339,530
November ...	150	4,289	769,283	675,178	1,448,900
December ...	144	2,455	563,503	452,270	1,018,372
January, 1939 ...	377	2,592	482,789	333,666	819,424
February ...	207	3,352	437,036	275,842	716,437
March	894	5,292	602,089	348,511	956,786
Total for year 1938-39 ...	13,138	155,718	11,905,466	12,079,287	24,153,609
Total for year 1937-38 ...	14,305	135,474	9,248,746	13,992,709	23,391,234
Total for year 1936-37 ...	13,352	141,118	8,627,510	16,891,315	25,673,295
Total for year 1935-36 ...	4,507	101,233	5,610,065	18,717,060	24,432,865

The significant features of this table are that while the total milk supply in 1938-39 was practically the same as in 1935-36, the quantity of Grade C milk was more than doubled and the quantity of Grade D milk declined by more than a third. The quantity of Grade B milk delivered in 1938-39 also showed a marked increase on the figures for previous years.

The monthly gallonages, by grades, are shown in the following table as percentages of the total supply:—

Month	Grade A.	Grade B.	Grade C.	Grade D.	Total
	%	%	%	%	%
April, 1938 ...	0.194	1.122	51.409	47.275	100
May	0.133	1.122	49.718	49.027	100
June ...	0.049	0.875	45.248	53.828	100
July	0.030	0.684	44.071	55.215	100
August ...	0.034	0.530	46.442	52.994	100
September ...	0.041	0.547	47.722	51.690	100
October ...	0.027	0.414	49.952	49.607	100
November ...	0.010	0.296	53.094	46.600	100
December ...	0.014	0.241	55.333	44.412	100
January, 1939 ...	0.046	0.316	58.918	40.720	100
February ...	0.028	0.467	61.001	38.504	100
March	0.093	0.553	62.928	36.426	100
Average for 1938-39	0.054	0.644	49.290	50.012	100
Average for 1937-38	0.062	0.580	39.539	59.819	100
Average for 1936-37	0.052	0.550	33.605	65.793	100
Average for 1935-36	0.019	0.414	22.961	76.606	100

The rapid increase which has taken place in the proportion of Grade C milk will be noted. Practically half the total quantity of milk delivered in 1938-39 was of Grade A, Grade B or Grade C, and in February and March, 1939, Grade C milk represented more than 60 per cent. of the supply.

The total amounts paid to suppliers of creameries and prescribed undertakings in respect of the five years 1934-35, 1935-36, 1936-37, 1937-38, and 1938-39 were approximately as follows:—

	1934-35	1935-36	1936-37	1937-38	1938-39
	£	£	£	£	£
Paid by creameries and prescribed undertakings ...	256,548	413,415	476,420	499,434	529,625
Paid by Ministry:—					
(a) Equalisation Payments ...	168,105	135,378	96,199	34,405	33,525
(b) Bonus Payments ...	1,501	24,256	37,235	48,230	100,619
Totals	£426,154	£573,049	£609,854	£582,069	£663,769

THE BACON INDUSTRY (NORTHERN IRELAND) ACT, 1939.

The Act is divided into six parts, of which the first (Factory Rationalization Scheme), the second (System of Pig Supply), and the fourth (Provisions as to Pigs Marketing Board and Scheme) are of particular importance.

Part I of the Act deals with the curing industry (excluding, however, curers who do not purchase for curing more than 60 pigs in any 4 consecutive weeks), and is designed to promote its better organization. It empowers the Ministry, after consultation with representatives of licensed bacon curers, to frame a Factory Rationalization Scheme which, by limiting or revoking the issue of curers' licences will have the effect of "increasing the efficiency of the bacon industry". The costs of curing pigs in a bacon factory are twofold in character, (1) the direct costs of labour in handling each pig, and (2) the overhead costs of running the factory, salaries of manager and clerks, interest on capital, premises, and so on. In most factories overhead costs can be reduced if throughput is increased, and this will be the object of the rationalisation scheme—to concentrate curing in a number of economic-sized factories so as to eliminate the high overhead costs involved in maintaining a large number of small factories, or factories which are not working to full capacity. Any Factory Rationalization Scheme is to be administered by a Committee appointed by the Ministry, and including at least one representative of the curers, and is to provide for the payment of compensation to curers whose licences are revoked. This compensation will be paid out of a Fund created by payments made by the curers themselves on a basis fixed by the Scheme. The Act lays down that adequate steps must be taken to ensure that all the interests affected have an opportunity of considering the Scheme, and if they so desire, of making representations against it, and the Scheme cannot be put into force until it has been approved by resolution of each House of Parliament. Provision is also made for the revocation of a Scheme by means of a similar procedure if the Ministry is satisfied, after holding an enquiry, that the Scheme is not in the interests of the bacon industry.

Part II of the Act is designed to guarantee stabilised prices for producers who supply pigs to curers under contracts. It first of all lays down that no pigs shall be sold to or bought by a curer except under a contract or a registered agreement. A contract may either be "direct", i.e., between producer and a named curer, or "open", i.e., between producer and curer through the Board, and may relate either to pigs sold alive or to pigs sold dead. A registered agreement is a modified kind of contract designed to suit the small producer, and limited in its application to a maximum of 30 pigs in any year, whether alive or dead. The Act empowers the Ministry to grant exemptions from the contract system, and also specifically exempts from its operation any pigs not more than 16 weeks old and any pigs which are either sold to a curer exempt from the provisions of the Act or which are not sold for the production of bacon. The determination of the various forms of contract is entrusted by the Act to the Pig Industry Council.

The price guaranteed by the Act is the resultant of several factors, but basically it is 70/- per cwt. for a "standard" pig when the price of the standard ration for pigs is 8s. 6d. per cwt. The Pig Industry Council has defined a "standard" pig as one of Grade 2 quality which is sold live and comes within the c.1.1.0 and c.1.2.3. dead weight range. The basic price for pigs sold dead has been fixed by the Council at 4/- below that of pigs sold alive. The guaranteed price of 70/- is reduced by 6d. per cwt. in 1940, and by a further 1/- in 1941, and is also dependent on the total quantity of pigs contracted to be delivered not exceeding 830,000 in 1940 and 850,000 in 1941.

The contracting pig producer is thus guaranteed a price which varies solely in accordance with the price of production, and is no longer affected by the cost of bacon. Similarly the curer is safeguarded against falling bacon prices by being guaranteed a standard bacon price. In this way Exchequer assistance acts as a buffer both to the producer and to the curer against increasing feeding stuff costs or falling bacon prices, and gives stability at a level designed to enable the efficient producer and the efficient curer to be sure of a margin of profit.

The allocation of pigs as between one curer and another, which the Act entrusts to the Pig Industry Council acting under the Ministry's directions, makes it essential for satisfactory arrangements to be made for the delivery of pigs to curers in each area in Northern Ireland, and the last section of

Part II of the Act gives the Council the necessary powers to evolve an economic and efficient system for the transport of pigs.

Part IV of the Act deals with the powers of the Pigs Marketing Board. It lays down that in future the members of the Board shall be elected by producers who have made contracts or registered agreements to supply pigs and modifies the previous arrangements under which the Minister was required to nominate 3 members of the Board administering the Pigs Marketing Scheme by providing that the Board need not necessarily contain members appointed by the Minister. In other words, the Act makes it possible for the Board to be entirely a producers' board, with no nominated members. As far as the powers of the Board are concerned, the Act reaffirms the Board's power to buy and sell pigs, to levy an administrative charge, to establish slaughterhouses, sell, pack, store, adapt for sale, insure, advertise and transport any pigs bought or commodities produced by the Board. On the other hand, it clarifies the control to be exercised by the Ministry over the appointments made by the Board, and provides that the Board's accounts shall each year be examined and reported upon by the Comptroller and Auditor-General. Moreover, it deprives the Board of three powers which it previously possessed—the power to require all pigs to be sold only to the Board, the power to regulate sales of pigs by determining the descriptions of pigs which may be sold, and the persons to or through the agency of whom pigs of any description may be sold, and the power to limit the number of pigs which any individual producer could sell. The importance of these powers may, however, be judged by the fact that they have never hitherto been exercised.

MARKETING SCHEMES AND ENACTMENTS.

AGRICULTURAL MARKETING (PIG INDUSTRY) ACT (N.I.) 1934.

PIG PRICES FOR AUGUST, 1939.

The following announcement has been made by the Pig Industry Council for Northern Ireland.

Prices for Dead Pigs.

The prices per dead cwt. for dead pigs sold by producers to curers in Northern Ireland in August, 1939, are as follows:—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Partly Black Pigs
c.1.0.21 to c.1.1.13	61/8	58/8	55/8	51/8	
c.1.1.14 to c.1.2. 3	65/8	62/8	59/8	55/8	5/-
Weight Class. (Dead Weight)	Grade A.	Grade B.	Grade C.	U.L. or U.F.	below relevant Grade Price
c.1.2. 4 to c.1.2.14	65/8	62/8	59/8	56/8	
c.1.2.15 to c.1.3.14	65/8	62/8	59/8	56/8	
c.1.3.15 to c.2.0. 0	62/8	59/8	56/8	53/8	
c.2.0. 1 to c.2.0.14	56/8	53/8	50/8	47/8	

Pig Carcases c.1.0.0 to c.1.0.20—58/8

(*N.B. These prices represent a decrease of 7d. per cwt. on the month*).

Authorised cuts:—

(a) Broken ham (dry, shank and/or shell bone break)—5% of the gross value of the carcase.

(b) Broken ham (wet break)—12½% of the gross value of the carcase.

(c) Shoulder-stuck carcase—3/- per shoulder affected.

The gross value of a carcase is the product of the dead weight and the relevant grade or other price per cwt.

Where portion of a pig carcase is condemned on account of disease the existence of which could not reasonably have been known to the producer before despatch to the curer, the appropriate grade price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply. If the carcase it wholly condemned on account of disease

the existence of which could not reasonably have been known to the producer before despatch to the curer the relevant Grade 2 or Grade B price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply.

The foregoing prices do not apply in the case of (a) wholly black pigs, boars, rigs or stags, sucked sows, and pig carcases weighing under c.1.0.0 or over c.2.0.14 and (b) pigs visibly diagnosable as diseased before despatch by the producer and subsequently condemned; emaciated or screw pigs; smelling pig carcases with definite indications of putrefaction and pig carcases badly abused or damaged before being handed over by the producer to the curer.

The attention of producers and curers is directed to the fact that the Council have determined that the premium payable on Wiltshire pigs sold alive by producers to Wiltshire curers (on direct contract) or to the Pigs Marketing Board (Northern Ireland) shall be 4/- per cwt. dead weight as and from 1st July, 1939.

PRICES FOR PIGS SOLD ALIVE ON DIRECT CONTRACT TO WILTSHIRE CURERS IN NORTHERN IRELAND, AND FOR PIGS SOLD ALIVE TO THE PIGS MARKETING BOARD (NORTHERN IRELAND) AND RESOLD TO WILTSHIRE CURERS IN NORTHERN IRELAND.

In the case of pigs sold alive to Wiltshire curers under direct contract or sold to the Pigs Marketing Board and resold to Wiltshire curers, the prices per dead cwt. during August, 1939, are as follows:—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Unsuitable
c.1.0.21 to c.1.1.13	69/8	66/8	63/8	59/8	56/8
c.1.1.14 to c.1.2. 3	69/8	66/8	63/8	59/8	56/8
	Grade A.	Grade B.	Grade C.	U.L. or U.F.	
c.1.2. 4 to c.1.2. 7	66/8	63/8	60/8	57/8	
c.1.0. 0 to c.1.0.20	Suitable 58/8		Unsuitable 56/8		
Over c.1.2.7	On the same basis as pigs sold dead.				

(*N.B. These prices represent a decrease of 7d. per cwt. on the month*).

PRICES FOR PIGS SOLD ALIVE TO THE PIGS MARKETING BOARD (NORTHERN IRELAND) AND NOT RESOLD TO WILTSHIRE CURERS IN NORTHERN IRELAND.

In the case of pigs sold alive to the Pigs Marketing Board during August, 1939, and not resold to Wiltshire curers, the prices per live cwt. according to grade, are as follows:—

Live Weight.	Grade 1.	Grade 2.	Grade 3.		Unsuitable
c.1.1.14 to c.1.2.13	44/–	44/–	44/–		42/6
c.1.2.14 to c.2.0. 0	52/3	50/–	47/9	U.L. or U.F. 44/9	42/6
c.2.0. 1 to c.2.1.14	46/3	44/–	41/9		39/6
c.2.1.15 to c.2.2. 7	44/–	41/9	39/6		37/3
c.2.2. 8 to c.2.2.21	39/6	37/3	35/–		32/9

These prices do not apply to live pigs under c.1.1.14 or over c.2.2.21, live pigs intended for breeding, live boars, live sucked sows, rigs or stags, injured or diseased pigs, live in-pig gilts, or live pigs sold (on contract registered with the Pig Industry Council) to curers in Northern Ireland. All other live pigs inside the weights c.1.2.0 to c.2.2.21 can be sold only to the Board.

Authorised Deductions.

Every pig (dead or alive) sold to a curer or to the Pigs Marketing Board is subject to a levy at present amounting to 5/8d.

In addition to this amount, a deduction of 4d. per pig may be made in the case of sales to curers of dead pigs and to the Board of live pigs resold to curers in Northern Ireland; a deduction of 7d. per pig may be made in the case of sales on Direct Contracts. These deductions are to cover insurance in the event of a carcase being condemned as unfit for human consumption.

GRADING STATISTICS.

(1) Dead Pigs.

Table showing the percentages of pig carcases for the Roll and Ham cure within the weight and grade classes indicated during May, 1939.

Under c.1.0.21		c.1.0.21 to c.1.1.13					c.1.1.14 to c.1.2.3					
Suitable	Unsuitable	Grade 1	Grade 2	Grade 3	U.L. & U.F.	U.	Grade 1	Grade 2	Grade 3	U. L. & U.F.	U.	Totals
1.15	.16	2.47	1.28	.36	.23	.02	4.95	5.45	2.11	1.01	.03	19.22

Grade A.				Grade B.				Grade C.				
1	2	3	4	1	2	3	4	1	2	3	4	
8.59	21.00	2.82	.44	6.56	21.28	3.95	.88	1.97	8.10	1.22	.24	75.05

Ungraded Carcases.

Under Grade A measurements. U.L.	Over Grade C measurements U.F.	Wholly condemned U.1.	Wholly black, injured or damaged U.2.	Overweights, boars, sows, etc. X.	Partly Black Y.	
.05	2.65	.02	.48	.52	.01	3.73
					TOTAL	100%

These figures have been calculated from the purchase and grading statements which the curers furnish to the Ministry.

The volume of trade in pig carcases in May was considerably heavier than in April, the aggregate being in the neighbourhood of 40,000 head. Prices, as fixed by the Pig Industry Council, were the same in both months, and with the average weight remaining unchanged, very little alteration occurred in the average prices, per cwt., and per head. The average price per cwt., after deductions had been made for levies, etc. in May, was £3 1s. 7d. The average weight c.1.2qr.19lb., and the average value per carcase £5 3s. 2d.

(II) Live Pigs.

The following table gives the percentage results of an analysis of the purchase and grading statements furnished by Wiltshire Bacon Curers in respect of live pigs delivered on direct contract by producers during the month of June, 1939.

Weight Class.	Grade 1.	Grade 2.	Grade 3.	Unsuitable U.L. or U.F.	Total
Under c.1.0.0					.04
c.1.0.0 to c.1.0.20					.68
c.1.0.21 to c.1.2.3	41.63	32.62	10.18	4.32	88.75
	Grade A.	Grade B.	Grade C.		
c.1.2.4 to c.1.2.7	1.84	2.38	1.07	.25	5.54
c.1.2.8 to c.1.3.14	1.26	2.19	1.27	.27	4.99
Over c.1.3.14					
				Total	100%

The average net price per cwt. in respect of these deliveries works out at £3 5s. 10d., after making allowance for insurance and contribution to the Pigs Marketing Board.

The average weight works out at c.1.1.20½, the net average price per pig being £4 14s. 4d.

COST OF STANDARD PIG RATION.

The average retail cash price per cwt. of the standard ration for the sixteen weeks' period ended 22nd July, 1939, was 8/5½d. The average price for the similar period ended 24th June was 8/6¾d. These figures have been calculated by the Ministry from returns collected from ten representative centres in Northern Ireland.

The following is the ration upon which the feeding cost is based:—

Maize Meal	30%
Barley Meal	30%
White Pollards	20%
White Bran	10%
Meat Meal (60% Protein) ...	10%

LIVE STOCK BREEDING ACT (NORTHERN IRELAND) 1922.

SPECIAL NOTICE TO BOAR OWNERS.

The Ministry, on the recommendation of its Advisory Committee in connection with the Breeding of Pigs, has made Amending Rules under the above-mentioned Act in regard to the licensing of boars. The new rules which will come into operation on the 1st January, 1940, provide that the prescribed age for the licensing of boars shall be six months, and that applications for licences should be made at least two months before the boars reach the prescribed age. In other words, it will be necessary that applications for licences should be made before the boars reach the age of four months.

In other respects no alteration has been made in the existing Regulations, and owners are reminded of the following main conditions:—

(a) Every boar of the prescribed age, whether retained for service purposes or not, must be licensed.

(b) Boars which are not licensed must be castrated, though in certain very exceptional circumstances permits may be given by the Ministry for the fattening for slaughter of boars that are not suitable for licensing.

(c) Applications for licences must be accompanied by the fee of 2/6d. for each boar.

(d) When a licensed boar is sold for breeding purposes or for slaughter, or when such boar dies or is castrated, the Ministry must be notified and the licence issued in respect of the boar must be returned to the Ministry without delay.

The Ministry, on the recommendation of its Advisory Committee, has agreed that as on and from the 1st June, 1940, only pure-bred boars will be licensed. Breeders will, therefore, appreciate that in future it will become of special importance that they should take prompt steps for the entry of particulars of litters in the Herd Books.

MARKETING OF EGGS ACTS (N.I.) 1924—1937.

NORTHERN IRELAND EGG PRICES.

The following table shows the prices fixed by the Ministry, and payable by licensed wholesale dealers, for eggs purchased from producers during the weeks specified, as compared with the prices fixed for the corresponding weeks of 1938.

Week ended	1939				1938			
	Hen Eggs per lb.*		Duck Eggs per doz.*		Hen Eggs per lb.		Duck Eggs per doz.	
	s.	d.	s.	d.	s.	d.	s.	d.
July 1st	0	8¾	0	9½	0	9	0	9½
,, 8th	0	8¾	0	10	0	9½	0	10
,, 15th	0	8¾	0	10	0	10¼	0	10½
,, 22nd	0	8½	0	10½	0	10¼	0	11
,, 29th	0	8	0	10½	0	10	1	0
August 5th	0	9	0	11	0	10	1	0

* Where hen eggs are delivered by the producer to the packing store of a licensed Wholesale dealer of Class A an additional ½d. per lb. is payable; in the case of duck eggs an additional ¾d. is payable for each complete dozen so delivered.

Payment on a quality basis came into operation during the week ended 5th March, 1938

The following were the standard deductions :—

Hen Eggs : "Seconds" and soiled eggs, ½d. per egg.

Rejects 1¼d. per egg up to and including week ended 15th July; during the weeks ended 22nd and 29th July, 1d. per egg, and for the week ended 5th August, 1¼d. per egg.

Duck Eggs : Rejects, ¾d. per egg during the week ended 1st July, afterwards 1d. per egg.

LONDON EGG PRICES.

Return of average prices of hen eggs at London on Monday each week, furnished by the London Egg Exchange, and published in the Weekly Dairy Produce Notes of the Imperial Economic Committee.

Hen Eggs, per 120.

Description	3/7/39	10/7/39	17/7/39	24/7/39	31/7/39
English National Mark—					
(Specials)	16/–	16/–	16/–	15/6	15/6
(Standards)	15/6	15/–	15/–	14/6	13/6
(Mediums)	13/–	13/–	13/6	13/6	13/–
(Pullets)	9/9	9/9	10/–	10/–	10/–
Northern Ireland—					
(Extra Specials)	15/3	15/3 15/6	15/3 15/6	14/9 15/3	14/– 14/6
(Specials)	14/9 15/–	14/6 14/9	14/6 14/9	13/9 14/3	13/6 14/–
(Standards)	14/– 14/6	13/9 14/–	13/9 14/–	13/– 13/3	12/6 13/–
(Selected)	12/6 12/9	12/6 12/9	12/9 13/–	12/6 12/9	12/– 12/3

AGRICULTURAL DEVELOPMENT ACT, 1939.

MAIN FEATURES.

The Agricultural Development Act, which received the Royal Assent on July 28th, gives authority for the adoption of a system of price insurance for three of the staple products of the farm, namely, oats, barley and sheep, which have hitherto lacked adequate safeguards. The Act also includes provisions designed to promote the Government's plans for expanding food production in time of war.

The principal features of the Act and the way in which farmers are affected thereby are as follows :—

Oats.

Under Part I. of the Act provision is made for the payment of an acreage subsidy to growers of oats and mixed corn whether or not they also grow wheat. If no wheat is grown on the farm or the farmer elects not to claim wheat deficiency payments, subsidy is payable on the basis of fourteen times the difference between the standard price of 8/- per cwt. and the average market price in the United Kingdom during the seven months September to March. Where the grower elects to claim wheat deficiency payments, then the rate is six times this difference.

In accordance with the announcement made by the Government on 23rd February last, the revised rates of subsidy payable under the Act will be applicable to crops, not only of oats and mixed corn, but also of barley grown in 1938. Farmers who have already received subsidy in respect of their 1938 crops under the Agriculture Act, 1937, need take no further action. The Ministry of Agriculture will be making payment during the next few weeks to such farmers of an amount necessary to bring the total payment to 31/6d. per acre.

Forms of application will be sent out to all other farmers whose agricultural returns in 1938 showed that they grew oats, barley or mixed corn, and who have not already received a subsidy payment this year. These forms of

application will be despatched during the week commencing Monday, 14th August. Any farmer who grew oats or barley in 1938 and received no subsidy under the Agricultural Act, 1937, should notify the Ministry at Stormont, Belfast, if he fails to receive an application form by 19th August.

It is also proposed to send out early in September a form of application to every farmer who grew oats or mixed corn this year.

BARLEY.

Barley cannot be treated in the same way as oats owing to the two distinct uses to which the crop is put, and Part II of the Act gives the Ministers power to make barley schemes, which may be either based on the principle of the payment of a minimum price for a minimum quantity of barley by brewers, distillers and other users for malting purposes, or by the payment of a levy by such users of barley, and contributions from the Exchequer to a central fund from which subsidy would be payable to growers on an acreage basis, the rates of levy and the amount of the Exchequer contribution being dependent upon the average prices realised for barley sold for malting and for feeding respectively.

There has been insufficient time to prepare and bring into operation by the beginning of the 1939 barley season a comprehensive long term scheme on either basis, and in accordance with the provisions of Section 20 of the Act, a temporary simplified scheme embodying the principle of a levy has been made and approved by Parliament for the 1939 crop only. Under this scheme, farmers will be required to make application for payments, and the forms of application will be sent out by the Ministry early in September. Barley grown mixed with other crops (except seeds) will not be eligible for the barley subsidy, but will be eligible for subsidy at the rate appropriate for oats.

SHEEP.

Sheep are dealt with in Part III, and the Second Schedule of the Act which provides for the preparation by the Livestock Commission of a subsidy scheme for fat sheep (including lambs) upon the basis set out in the Act. Paragraph 6 of the Second Schedule lays down that the basic annual standard price shall be 10d. per lb. of dressed carcase weight, subject to reduction if the sheep population of the United Kingdom in any year exceeds 27 million. Monthly standard prices based on this annual figure will be fixed by Order so as to correspond with seasonal variations, and these monthly standard prices will be used in relation to monthly average market prices in order to calculate whether or not subsidy shall be payable. Unlike cattle, sheep are not weighed when sold in livestock markets, and the Act, therefore, enables standard weights to be fixed for different classes of sheep. The amount of subsidy received by the producer on any particular sheep, will be calculated by multiplying the appropriate standard weight by the difference between the average market price in a particular month and the monthly standard price.

It is obvious that apart from the preparation of the scheme and of the Regulations and Orders required to be made by the Act, it will take some little time to make the necessary administrative arrangements and to set up the machinery for certifying sheep, and it is not expected that this part of the Act can be brought into operation before 1st October at the earliest.

Grants for Ploughing up Grassland.

Part IV. of the Act provides for the payments of grants for grassland ploughed up during the period between 4th May and 31st October, 1939. The conditions to be observed in order that land may be eligible for grant have already been published and, in fact, considerable progress has already been made with this scheme.

Official forms of application for the ploughing up grant will be sent to farmers who have notified their intention to plough up grassland. Before land becomes eligible for subsidy, however, it must satisfy certain conditions regarding cultivations, and the grant will not be paid until the Ministry is in a position to satisfy itself that these conditions have been fulfilled. Payment will probably be made in November in respect of land ploughed up during the summer, while where ploughing is delayed until September or October, it may be necessary to defer the payments until the spring.

Other Provisions.

The remaining provisions of importance relate to reserves of agricultural tractors and machinery, and certain payments to the Agricultural Mortgage Corporation to enable the Corporation to overcome certain difficulties which have hampered its activities in recent years.

Inspections.

The Minister is enabled to withhold or reduce payments of oats and barley subsidy for this year, and future years, if the land has been negligently cultivated or has been cropped in a manner likely to impair the fertility of the soil, or, of grants for ploughing up grassland if the conditions are not observed. Every farmer who makes application for any of these subsidies or grants is liable to inspection without notice by an Officer of the Ministry, and the Officer will be authorised in writing to enter upon any farm for the purpose of making his inspections.

FURTHER ADVICE TO APPLICANTS FOR GRANTS FOR PLOUGHING UP GRASSLAND.

There appears to be some misapprehension among farmers with regard to the conditions which it is necessary to observe if land ploughed up is to be eligible for the grant of £2 per acre. It should be understood that the land must have been down to grass for at least seven years, that it must be land

which would benefit by ploughing up and would be suitable, if the need were to arise, for producing satisfactory arable crops in 1940, that it must be brought into a state of cleanliness and fertility by appropriate cultivations, and that the ploughing must be completed not later than the 31st October next.

Where a catch crop is sown this year the Ministry's approval of the proposed crop must be obtained, but with this exception, the farmer is free to decide in what manner the land should be cropped and when it could most advantageously be re-seeded. Cereal crops may be sown in the autumn of this year or the spring of next year, if this is considered desirable, either alone or as a nurse crop for seeds. In many cases it would, of course, be advisable for the occupier to seek the advice of the County Agricultural Organiser as to the best course to pursue, having regard to the nature of the soil and the climatic and other conditions obtaining in the district concerned. If it is not convenient for the farmer to sow a catch crop the land may be let lie fallow until the spring of next year.

Where wheat, oats or barley is harvested in 1940 on land for which the ploughing grant was paid, these crops will be eligible for any subsidies which may become payable under the Wheat Act and the Oats and Barley Subsidy Scheme.

Farmers who intend to take advantage of this scheme are reminded of the desirability of applying suitable fertilisers and lime, and of the facilities under the Land Fertility Scheme for assistance in the provision of lime and basic slag.

Leaflets No. 40, "The Laying Down and Management of Temporary Pastures", No. 90, "The Improvement of Grassland", and No. 84, "Lime and Liming", should be consulted for full information regarding the sowing, manuring, liming and management of grassland.

ACREAGES IN RESPECT OF WHICH NOTIFICATIONS HAVE BEEN RECEIVED UP TO AUGUST, 1939.

County	No. of notifications.	Area (acres).
Antrim	185	1,791
Armagh	101	785
Down	168	1,358
Fermanagh	50	389
Londonderry ...	194	1,526
Tyrone	492	3,495
Northern Ireland ...	1,190	9,344

WHEAT ACT, 1932.

AMENDMENT.

The Wheat Act, 1932, has been amended in a number of respects by the Wheat (Amendment) Act, 1939, which became law on 13th July, 1939. In the main the amendments relate to administrative and technical matters connected with the working of the Act, and no change has been made in the general provisions of the original Act governing the making of deficiency payments to wheat growers. A short account of the provisions of the Amendment Act which are of particular interest to growers and farmers generally is given here for their information.

Provision is made for the appointment of a Committee of three persons this year, and at intervals of three years in future, to consider and report to the Minister whether any alteration is desirable in the standard price of wheat (at present 10/- per cwt.). It will be recalled that the Committee which was appointed in 1935 recommended that no change should be made in the standard price at that time, and also suggested that the question should be reviewed after a further interval. On the 14th July, 1939, the Minister appointed Sir Harry Peat, K.B.E., F.C.A. (Chairman) ; Mr. W. R. Smith, and Mr. Cyril Lloyd as the Standard Price Committee for this year, with Mr. W. C. Tame, 10, Whitehall Place, London, S.W.1. as Secretary.

The Act also provides that in future any person who purchases growing wheat, or wheat cut but not threshed, will be entitled to claim deficiency payments when he sells the wheat as threshed wheat. In connection with the liability of millers and importers of flour to make quota payments, new definitions, on the basis of ash content, have been laid down for "flour" and "wheat by-products" (previously "wheat offals"), and quota payments on low-grade flour destined for live stock will be leviable in accordance with a diminishing scale. New conditions have also been made for the quota free sale of wheatmeal—the restriction upon "further manufacture" has been removed and quota-free substances may now be manufactured into cubes or pellets without attracting quota payments. This exemption also applies to the following forms of flour, provided they are produced in the United Kingdom and are destined for live stock :—

1. Wheat provender mixture, i.e., any mixture containing not more than 50 per cent. by weight of wheatmeal or other flour. If the ash content of the wheaten part exceeded 2.7 per cent. the parcel would be wheat by-products and would not require admixture in order to secure exemption.
2. Flaked or rolled wheat mixture, i.e., any mixture, the wheaten part of which consists only of flaked or rolled wheat and does not constitute more than 75 per cent. by weight of the mixture.

3. Cut wheat, i.e., cleanly divided fragments of whole wheat free from meal or dust.

4. Multure meal, i.e., any wheatmeal or flour delivered to the grower who grew the wheat from which it was produced, and who intended to use it for feeding to his own livestock. This provision is designed to suit the custom of "multure" in Northern Ireland, and no deficiency payments are made on wheat used in the production of meal.

Where a miller includes more than the permitted percentage of wheat in his mixture when producing wheat provender mixture or flaked or rolled wheat mixture, he will be liable for quota payments only in proportion to the excess of the wheaten part over 50 per cent., or 75 per cent. of the mixture, as the case may be. A miller whose deliveries consist only of wheat provender mixture, flaked or rolled wheat mixture, cut wheat, and multure meal may obtain from the Wheat Commission a provender miller's certificate certifying that he is exempt from liability for quota payments.

The Act also empowers the Wheat Commission to make grants or loans in aid of research and education in regard to the growing, marketing or utilisation of wheat. The remaining provisions concern the imposition of quota payments on breakfast foods, the arrangements for the collection of quota payments and other matters of administration.

ASCERTAINED AVERAGE PRICE.

The Wheat (Ascertained Average Price) Order, 1939, dated August 1, 1939, made by the Minister of Agriculture and Fisheries under Section 2 of the Wheat Act, 1932 (22 and 23 Geo. V., c. 24).

The Minister of Agriculture and Fisheries has made the following Order, in accordance with the terms of the Wheat Act, 1932:—

(1) The price which the Minister determines to have been the average price obtained by registered growers throughout the United Kingdom for home-grown millable wheat of their own growing, sold by them in the cereal year ended on the thirty-first day of July, 1939, is 4 shillings 6.786 pence per hundredweight.

(2) The quantity of home-grown millable wheat of their own growing sold by registered growers in the cereal year ended on the thirty-first day of July, 1939, is thirty-six million seven hundred thousand hundredweights.

THE CATTLE INDUSTRY (EMERGENCY PROVISIONS) ACTS, 1934 AND 1935 AND THE LIVESTOCK INDUSTRY ACT, 1937.

SUMMARY OF PAYMENTS.

The following is a summary made under these Acts up to and including **29th July, 1939.**

Live Weight.	No. of Animals.	Total Amount paid.
		£ s. d.
England and Wales	5,358,470	13,390,138 19 8
Scotland	1,653,613	4,399,084 9 3
Northern Ireland	552,681	1,189,616 14 1
Total (United Kingdom)	7,564,764	18,978,840 3 0
Dead Weight.		
England and Wales	161,973	407,568 17 11
Scotland	49,958	148,689 10 8
Total (Great Britain)	211,931	556,258 8 7

NUMBERS CERTIFIED FOR SUBSIDY.

The numbers of fat cattle certified for payment of subsidy in June, **1939**, have been as follows:—

	June, 1939.					Corresponding totals in	
	Home-bred		Imported		Total	June, 1938	June, 1937
	Ordinary Grade	Quality Grade	Ordinary Grade	Quality Grade			
England ...	18,920	36,092	4,801	17,457	77,270	74,142	84,250
Wales ...	1,246	1,707	38	182	3,173	2,929	3,471
Scotland ...	1,859	14,560	1,399	11,336	29,154	28,366	28,825
Northern Ireland	4,407	1,848	357	397	7,009	6,173	7,266
United Kingdom	26,432	54,207	6,595	29,372	116,606	111,610	123,812

As the great majority of fat stock markets are held on the early days of the week the rate of marketing of fat cattle cannot be judged accurately from the number of animals marketed in a calendar month. For comparative purposes appropriate weights are applied by the Livestock Commission to each day of the week, and the figures for each calendar month are adjusted accordingly, so as to allow as far as possible for the fact that a large number of markets are held on Mondays, and that the number of markets held decreases day by day as the week proceeds. The adjusted figures for June, **1939**, 1938 and **1937**, are **121,115, 114,304 and 121,550** respectively.

AVERAGE PRICES OF CERTIFIED CATTLE.

The average prices per live cwt. of certified cattle in June, 1939, have been:

	June, 1939						Corresponding averages in			
	Ordinary Grade		Quality Grade		Average		June, 1938		June, 1937	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
England	39	10	43	1	42	1	43	9	—	
Wales	40	5	44	5	42	9	43	10	—	
England and Wales	39	11	43	1	42	2	43	9	43	7
Scotland	40	0	43	7	43	2	44	7	45	9
Northern Ireland	38	11	41	1	39	5	40	6	41	11
United Kingdom	39	10	43	3	42	4	43	10	44	1

AGRICULTURAL NOTES.

SEASONAL FARM NOTES.

Oats.—The oat crop should be cut while there is still a tinge of green in the straw. Over-ripening of oats leads to a loss of grain through shedding, a reduction in the feeding value of the straw, and, frequently, to difficulties in harvesting operations.

Much of the hay crop produced a lighter yield this year than usual, and for that reason it is likely that more oat-straw than usual will be required next winter to supplement the supplies of hay. Oat straw from a crop which was cut while still fairly green, and which was not exposed to bad weather conditions, makes valuable fodder and is preferable to badly-saved hay. Farmers are, therefore, advised to cut the oat crop early, and by so doing not only to obtain a straw of high feeding value, but to increase the chances of getting good weather for saving the crop. Even if the grain is soft at cutting time it will fill out and become quite firm while the sheaves are in stooks.

Barley.—The barley crop must be thoroughly ripened before harvesting, especially if the grain is being produced for malting purposes. When ready for cutting the crop is dead white in appearance, without any trace of greenness in the straw, the heads are hanging over, and the individual grains are hard and dry.

Potatoes.—If, in spite of frequent spraying, the potato tops become infected with blight disease, the only way to prevent the disease from being washed into the soil and attacking the tubers is by destroying the tops immediately. Examples of sprays suitable for this purpose were given in last month's report, and are also in Leaflet No. 87.

While the early destruction of the tops may mean a slightly reduced yield of tubers, it is more economical to have a smaller yield of sound tubers than a normal yield of diseased potatoes. Where seed potatoes are being produced the early destruction of the tops will increase the proportion of tubers of seed size.

Seed Production.—The tops of crops intended for seed should be destroyed as recommended above. When the tops have died down completely the crop should be lifted and, in every case, the seed size tubers should be separated from the ware and stored separately in an easily accessible place. Seed should never be put in pits through the potato field, for if this is done it will not be possible to fill orders during weather which prevents carting over the field, and it is often during spells of such weather that the best price can be obtained.

Land Fertility Scheme.—Farmers should take advantage of this Scheme, while it is still in operation, to apply a dressing of lime to their land. The best time to apply lime to arable ground is after the land has been ploughed for the last time in the rotation, just before it is sown out to grass. For permanent grassland, however, the best time to apply lime is during the autumn. The ground should be first thoroughly harrowed, particularly where there is a mat of decayed grass and moss. Land which was dressed with a phosphatic manure such as Basic Slag or Ground Rock Phosphate last autumn will respond best to an application of lime now.

Ploughing up old Grassland.—Farmers who intend ploughing up old grassland should stock the ground heavily from now onwards in order to have the herbage eaten as bare as possible. Where the land is being sown down directly to pasture next season it would be very advisable to apply a dressing of from 30 cwt. to 2 tons of burnt lime per statute acre. This dressing may be applied at any suitable time during the winter, but at least two weeks before the seeds are sown.

Destruction of Rushes.—Rushes are generally found growing on wet ground and can often be eradicated by draining the ground thoroughly.

Where the ground is not water-logged, however, the rushes can be reduced considerably in number by cutting twice during the year. The summer cutting should be carried out now and the rushes raked off and burned. If the weeds are allowed to remain on the ground seed may be shed from those plants which have already grown to the seed-producing stage, so leading to fresh infestations next year. For the same reason rushes which are cut should not be used for bedding purposes.

SEASONAL LIVESTOCK NOTES.

Hoose or Husk in Cattle.—It is important to adopt preventive measures against hoose from now onwards. Young cattle should be housed at night, well fed with hay or straw, and an allowance of concentrates given. The cattle should not be allowed out in the morning until the dew is off the grass. The adoption of these simple measures at an early stage will prevent the disease from becoming so serious as to cause loss through the death of animals.

For further information on this disease see Leaflet No. 80.

Feeding Milk Cows.—Where it is necessary to maintain a steady milk supply the milk cows will require to be given an increased allowance of a meal mixture which is richer in protein than normal summer rations. Leaflet No. 16 deals fully with the rationing of dairy cows, and farmers are advised to consult this Leaflet, especially when the change-over to winter rations is being made.

Sheep.—All ewes which have "broken" mouths or defective udders should be rejected from the breeding flock, and specially marked for disposal. The breeding flock should be put on better pastures now, and mated with a good ram. Farmers are reminded of the Premium Scheme for Border Leicester Rams which is in operation. Under this scheme premiums are offered by County Committees of Agriculture to encourage the purchase of superior rams, and farmers living in the vicinity of one of these rams should make a point of having at least a few of their best ewes mated with him. Those desiring to be considered for selection as premium holders should make application at once to the Agricultural Organiser or Secretary of the County Committee of Agriculture, from whom all particulars can be obtained.

Assistance is also given by the County Committees to breeders of blackface sheep to purchase high-grade rams for mating with their flocks. For the purpose of introducing fresh blood, facilities will also be available for the admission of sheep into Northern Ireland from certain sales in Scotland. Particulars of these sales are given on page 258.

Recognition of Service Dates.—Before the ewes are mated the wool should be clipped from around their tails, those with long tails receiving special attention. The breast of the ram should be treated with keel or other colouring matter, so that the date of service may be noted. The keel should be mixed with lard or grease, which keeps it soft and effective for some weeks. Oil should not be used for this purpose, as it damages the wool and also causes the colouring mixture to harden, rendering it ineffective. The colour of the keel should be changed every three weeks so that it may be known whether or not the ewes are returning to service, thus giving an opportunity of changing the ram should it be found necessary to do so.

Liver Fluke in Sheep.—This disease is generally most prevalent in sheep which are grazing on low-lying marshy pastures. Such pastures should, if possible, be avoided at this time of year. Where marshy pastures must be used, however, an attempt should be made to drain them, but if drainage is impracticable they should be treated with a mixture of 1 cwt. powdered copper sulphate and 4 cwt. dry sand, applied at the rate of 2 cwt. of the mixture per statute acre. This treatment will kill large numbers of the snail which is necessary for the development of the fluke. If the land is treated with copper sulphate, as described above, no stock should be allowed on it for at least one month after treatment.

Where the disease was prevalent in previous seasons it is recommended that the sheep be dosed with carbon tetrachloride as routine practice. Full particulars regarding this treatment, and of the precautions necessary when using carbon tetrachloride, are given in Leaflet No. 24.

Housing.—When bad weather prevents ordinary harvest work being done the opportunity should be taken to repair and improve the houses which will be used for the over-wintering of stock. It should be remembered that sufficient light and fresh air, a water-tight roof, and a dry, warm floor are essential if cattle and other livestock which are housed during the winter are to remain in a good healthy thriving condition. Small, dark houses should have windows provided for air and light. If concrete floors are being laid a good foundation of stones should be used to prevent the damp from coming up through the concrete from the soil. Where corrugated iron roofs are used it would be highly advisable to sheet the roof with timber underneath the iron. This will aid in keeping the stock warm during cold winter days.

SEASONAL POULTRY-KEEPING NOTES.

Culling of Pullets.—Early hatched pullets will have now reached a stage when an opinion can be formed as to their suitability for inclusion in the laying flock. Some inferior birds will be found in most flocks, and a policy of rigorous culling should be pursued. Birds which are undersized and apparently weakly or deformed in any way should be taken out and disposed of. Birds which commence to lay at a very early age are usually small-bodied and lay small eggs. Such birds should be specially marked for disposal after the first laying season, and not used for breeding later. The best layers in a flock are usually those which commence to lay after those which start first, but before those which are last in the flock to begin laying. Leaflet No. 29 contains useful hints on the culling of pullets, and should be read by those not familiar with this work. The Poultry Instructor for the district is also available for giving demonstrations on the culling of pullets.

Feeding of Pullets.—A delay in the transfer of birds from the rearing ground to the laying quarters may induce moulting in pullets which have already commenced to lay. This change should, therefore, be made in good time, and in any case before the birds commence to lay. Birds coming into lay should be fed well. A suitable mash where separated milk is available is:

4	parts	by weight	pollards or sharps
2	,,	,,	bran
2	,,	,,	maize meal
1	part	,,	Sussex ground oats

If separated milk is not available 1 part by weight of white fish meal or of high-grade meat meal, or 1½ parts by weight of extracted soya bean meal, should be added to the above mixture. Where extracted soya bean meal is used as the milk substitute it is necessary to add a mineral mixture consisting of 2 parts by weight ground limestone and 1 part by weight common salt at the rate of 2 lb. to each cwt. of meal mixture. Leaflet No. 3 contains examples of suitable meal mixtures to use for egg production.

Selection of Breeding Stock.—Birds for the breeding flock should now be selected. The use of pullets for breeding is not recommended, because little can be known of their stamina or ability to produce eggs. A careful selection should be made from year-old hens, discarding any which show signs of deformity or loss of vigour. Hens which commenced to lay very early as pullets should also be discarded. It is very important that the hens selected for breeding should be of good size, if a large-size strain of birds is to be built up, as good size in the offspring is inherited to a very great extent from the hen. Cockerels should also be selected now. Only birds of good size and of vigorous appearance should be considered. Small cockerels, if used for breeding, will usually produce small precocious pullets which lay small eggs and have a short life.

Management of Breeding Flock.—Hens selected for breeding should be moved to their new quarters early in August. The change will encourage a moult in any birds which have not already moulted, thus giving them a rest before starting to produce eggs for hatching. A grain ration consisting of oats only, or a mixture of oats and wheat, given in two daily feeds, will be sufficient food for these hens at present. Care should be taken not to overfeed the birds, and each feed should have been all cleaned up by the hens before the next feed is due to be given. Useful hints on the feeding and management of breeding stock are given in Leaflet No. 83.

Housing Accommodation.—Good housing accommodation, well-lighted, well-ventilated, and free from draughts, is essential if the hens are to lay well throughout the winter. The birds should have ample room, so that there may be plenty of scratching space available in the house when the flock is kept indoors on cold, wet days. If the hens are on free range, each should have about 9 inches of perch space and 2 square feet of floor space in the house. On this basis, a house 12 feet by 10 feet will accommodate about 60 hens.

At this time of year, when hens are being transferred from one house to another the opportunity of disinfecting the houses should be taken. Arrangements should be made to leave each house vacant for a few days in turn. The houses should be thoroughly washed out and all utensils scrubbed. A good disinfectant, such as a 5 per cent. solution (1 part in 20 parts water) of Jeyes' fluid, should then be used to disinfect all parts of the house and appliances.

Turkeys.—Young turkeys should be encouraged to range over fresh clean pasture, such as aftermath. Access to clean ground which has not been soiled by turkeys or other poultry will aid greatly in preventing trouble amongst the flock. The food at this stage may consist largely of grain, but one feed of soft mash should be given daily. The birds should go to roost at night with full crops.

Useful hints on the feeding and management of turkeys are given in Leaflet No. 37.

SEASONAL GARDEN AND ORCHARD NOTES.

STRAWBERRIES.—New plantations of strawberries should be made not later than the end of August if possible. If made later than this they are never so successful as those made earlier. The ground intended for strawberries should be deeply dug or ploughed and a dressing of well rotted farmyard manure worked in at the rate of from 25 to 30 tons per acre. All perennial weeds, such as couch grass, etc., should be carefully removed, and when the ground is being harrowed a dressing of superphosphate at the rate of from 2 to 3 cwt. per acre should be given. The young plants must be made firm in the soil, and care must be taken to see that the crowns are not buried below the soil level. When planting is finished the crowns should be level with, or just slightly below, the level of the ground. If there is any danger of the young plants being infested with insect pests they should be dipped for several minutes and kept stirred in a nicotine solution before being planted. The solution is prepared as follows:—

1 fluid ounce nicotine
½ lb. soft soap
5 gallons water

All the strawberry plants should be sprayed, if not already done, in the manner recommended in last month's notes if the plantations are to remain free from disease.

FRUIT BUSHES.—Cut out the old fruiting canes of raspberries, loganberries, and some of the oldest branches of black currant bushes, if this has not already been done.

VEGETABLES.—Plants of Brussels sprouts, broccoli, borecole, etc., should be moulded up before they meet across the ground. This will help to destroy any existing weeds, and the growth of the plants will suppress future weed growth. In addition, extra support will be given to the plants for the winter. The moulding up of celery should be continued as growth advances, and the plants should be sprayed at intervals of about a fortnight with Burgundy mixture to protect them from celery leaf spot disease. The Burgundy mixture consists of 1 lb. bluestone, 1¼ lbs. washing soda, and 10 gallons water.

As soon as the cabbage plants from the July sowing are fit to handle the largest of them should be transplanted to a nursery bed, inserting them three or four inches apart each way. In this way more sturdy plants are obtained for planting out next month than if they were left in the seed bed. Keep weeds down by the use of the hoe on all favourable occasions, and as ground becomes vacant dig it over.

FLOWERS.—See that all plants requiring support are securely staked against wind. Remove old flowers and seed pods so as to prolong the flowering period.

Fruit.—Arrangements should be made now for the provision of packages for the storing and marketing of the apple crop. Few apple growers make suitable provision in time, and the majority are usually handicapped when picking commences through lack of suitable arrangements being made. Early varieties of apples should not be held this year, but marketed as soon as possible, so as to provide as much space as possible for the Bramley's Seedlings.

ANNOUNCEMENTS AND REMINDERS.

GENERAL.

Stormont Egg Laying Test.—The next Egg Laying Test at Stormont begins on the 1st October, 1939, and copies of the rules, along with entry forms, can be obtained from the Ministry free, on request. Entries are now being received, and those who desire to enter pens for the Test should post their entry forms so that they will reach the Ministry not later than the 1st September next.

Greenmount College.—The next session at Greenmount Agricultural and Horticultural College begins on the 10th October. Copies of the prospectus, which gives details of the courses of instruction provided, can be obtained from the Agricultural Organiser, County Antrim Committee of Agriculture, Courthouse, Crumlin Road, Belfast, from the Ministry, or from the County Instructor.

Ulster Dairy School.—The next session at the Ulster Dairy School, Cookstown, commences on the 12th September, 1939. Girls intending to take advantage of the instruction given at the School should apply immediately to the Ministry for admission. Copies of the prospectus, which gives full particulars with regard to fees, course of instruction, etc., can be obtained free of charge from the Ministry, or from the County Poultry Instructor.

North West School.—The next session at the North West School, Strabane, commences on the 10th October, 1939. Free scholarships to this school are given by the County Committees of Agriculture, so that the instruction is free. Copies of the prospectus, which contains full particulars of scholarships, course of instruction, etc., can be obtained free of charge from the Ministry, the Secretary or Organiser of the County Committee of Agriculture, or the County Poultry Instructor. Applications for scholarships should be sent to the Secretary or Organiser. (See page 256 for addresses).

County Poultry Stations.—Those desirous of being considered for hen, goose and turkey stations for the coming season should make application at once to the Secretary of the County Committee of Agriculture, or to the local Poultry Instructor, as the selection of persons to keep such stations will be made in the near future by the various County Committees of Agriculture.

Lectures and Classes.—Arrangements are now being made by County Committees of Agriculture regarding programmes of lectures to be given during the coming winter by the Instructors. Requests for lectures to be given at particular centres should be sent to the Secretary, or Agricultural Organiser to the County Committee of Agriculture for the County.

Winter Agricultural Classes.—The centres selected by County Committees of Agriculture for the classes which will begin early in November next are as follows:—

Antrim—Dunloy, Cushendall, Randalstown and Carnalbana.
Armagh—Hamiltonsbawn and Blundell's Grange (Armagh).
Down—Ballee (Downpatrick) and Banbridge.
Fermanagh—Thompson's Bridge and Tempo.
Londonderry—Cross (Londonderry) and Eglinton.
Tyrone—Sixmilecross, Augher, Ardbarron (Castlederg), Altishane (Donemanagh), Kildress (Cookstown), and Drumond (Moy).

Full particulars regarding the buildings in which the classes will be held, opening dates and class hours, can be obtained from the Secretary of the County Committee of Agriculture, or from the Agricultural Instructor.

Instruction in all branches of farming is given at these classes, free of charge. Young men residing in the districts in which the classes are to be held are strongly advised to make an effort to attend the classes. As only a limited number of men can be admitted to each class those desiring to take advantage of the Instruction should make application at once to the Secretary or Agricultural Organiser of the County Committee of Agriculture, or to the Agricultural Instructor.

NAMES AND ADDRESSES OF SECRETARIES AND AGRICULTURAL ORGANISERS OF COUNTY COMMITTEES OF AGRICULTURE.

County	Name and Address of Secretary or Organiser.
Antrim	Mr. R. D. Mackay, N.D.A., N.D.D. (Organiser), Courthouse, Crumlin Road, Belfast.
Armagh	Mr. S. Jordan, B.Agr. (Organiser), Russell Street, Armagh.
Down	Mr. J. L. M'Whinney, B.Sc., A.R.C.Sc.I. (Organiser), Northern Bank Chambers, May Street, Belfast.
Fermanagh	Mr. W. T. M'Clintock, B.Agr. (Organiser), Courthouse, Enniskillen.
Londonderry	Mr. T. K. Caldwell (Secretary), Courthouse, Coleraine.
Tyrone	Mr. W. Walsh (Secretary), Courthouse, Omagh.

NORTH WEST SCHOOL, STRABANE.

The second term of the year 1939 at this School ended on the 16th June, and there were 24 pupils in the class, all of whom held Scholarships awarded by the various County Committees of Agriculture. The number of Scholarship-holders from each County was as follows:—

County Antrim	...	3
County Armagh	...	4
County Down	...	7
County Fermanagh	...	3
County Londonderry	...	1
County Tyrone	...	6

The following pupils are now in residence at the school as scholarship-holders for the term, 18th July to 29th September:—

County Antrim.

Miss W. A. P. Gamble, The Lane, Straid, Ballynure.
„ M. E. M'Ninch, Ballymullock, Larne.
„ N. Rowney, Ballybracken, Ballynure.

County Armagh.

Miss A. M. Gillespie, 13 English Street, Armagh. (2nd term.)

County Down.

Miss J. M. Dougan, Ballycross, Banbridge. (2nd term.)
„ E. C. Fitzsimons, Glebe, Kilcrief, Strangford.
„ E. I. Reynolds, Main Street, Hillsborough.

County Fermanagh.

Miss E. Mullin, Moneendogue, Belleek.

County Londonderry.

Miss S. M. Henderson, Moneyhaw, Moneymore.
„ E. T. Keenan, Grovehill, Castledawson.
„ M. C. M'Cahon, Lisgorgan, Upperlands.

County Tyrone.

Miss E. Monaghan, "The Beeches," Fintona.
„ A. T. M'Anenly, Glencull, Ballygawley.
„ M. M'Cullagh, Glenlark, Gorticastle, Gortin, Omagh.

Each County Committee of Agriculture is offering a number of Scholarships to cover the cost of tuition, board and residence at the school for the term which will commence on 10th October, 1939. Candidates who wish to be considered for the award of these Scholarships should submit their applications as soon as possible to the Secretary or Agricultural Organiser of the County Committee of Agriculture for the County in which they reside. Copies of the free illustrated School Prospectus, containing forms of application for admission, can be obtained from the Secretary (or Agricultural Organiser) of the County Committee of Agriculture, the local Instructor in Poultry-keeping, the Lady Superintendent, North West School, Strabane, or the Secretary, Ministry of Agriculture, Stormont, Belfast.

FLAX WATER.

The Ministry of Commerce and the Ministry of Agriculture desire again to bring to the notice of flax growers the serious effects occasioned by the indiscriminate discharge of flax water into streams and rivers.

Flax water may cause serious damage to agricultural, manufacturing and fishery interests by—

(a) polluting water required for cattle as well as for human consumption;

(b) affecting injuriously the water used in trades and industries giving extensive employment in rural districts, such as bleaching, dyeing and finishing;

(c) destroying fish life, not only in the immediate area of pollution, but throughout the entire river system along which the polluted water flows to the sea.

The discharge of deleterious flax water into rivers, streams and watercourses is an offence against the law, and persons responsible are liable to prosecution.

Accordingly, it is desired to impress upon flax growers the necessity for taking the utmost care in their own interests, as well as in those of other farmers, and of fishermen and manufacturers, in regulating the discharge of water in which flax has been retted.

Flax growers are requested to ensure that flax water should not be released before the month of January, except when heavy rainfall has occurred, and the flooded condition of the rivers and streams would allow the flax water to be discharged without risk of causing pollution.

IMPORTATION OF SHEEP INTO NORTHERN IRELAND FROM SCOTLAND.

Provided no unforeseen circumstances arise, the Ministry will be prepared to admit breeding sheep from the following sales to be held in Scotland during September and October, subject to the salesmasters conducting the sales complying with certain conditions laid down by the Ministry.

With the exception of the sales on the 5th September, at Lanark, and the 6th and 7th September at Perth, an officer of the Ministry will be in attendance for the purpose of issuing permits for the importation into Northern Ireland of animals purchased, and before making any purchases persons from Northern Ireland should get into touch with him in the saleyard. Northern Ireland purchasers of sheep at any of the sales on the 5th, 6th and 7th September, indicated above, should apply direct to the Ministry for the necessary permit.

These facilities are intended for breeders only who wish to retain the animals purchased at the sales for breeding purposes. All animals imported must be moved directly from the Northern Ireland port of landing to the farms to which they are licensed, where they are to be isolated and detained for a period of not less than 14 days.

It should be understood that these arrangements may be either modified or cancelled at any time if, in the opinion of the Ministry, the disease position in Great Britain should warrant the adoption of either course.

Persons interested should, if possible, communicate with the Ministry before going to the sales.

1. **Lawrie & Symington, Lanark.**

5th September	...	Blackface Shearling and Lamb Rams.
13th September	...	Border Leicester Lamb Rams, Ewes, Gimmers and Ewe Lambs.
26th & 27th September	...	Blackface Ewes, Leicester and Down Rams, and Blackface Gimmers.
10th October ...	...	Blackface and Cheviot Ewes and Gimmers, and Border Leicester and Down Rams.
13th October ...	...	Blackface Rams and Lamb Rams.

2. **J. Craig, Ltd., Ayr.**

21st & 22nd September	...	Blackface and Cheviot Hill Ewes and Lambs.
28th September	...	(Ayr Ram Society's Show and Sale)—Border Leicester, and Blackface Rams and Lambs.
29th September	...	Blackface and Cheviot Hill Ewes.

3. **Macdonald, Fraser & Co., Ltd., Perth.**

6th September	...	Border Leicester Rams and Ram Lambs.
7th September	...	Blackface Shearling Rams and Ram Lambs.

4. **Live-Stock Marts, Ltd., Stirling.**

6th October ...	...	Blackface Shearling Rams and Ram Lambs.
10th October ...	...	Uncrossed Blackface Ewes.
17th October ...	...	Uncrossed Blackface Ewes.

EXPORT OF RAW APPLES TO EIRE.

The Government of Eire have agreed that a limited quantity of raw apples of United Kingdom origin may be admitted into Eire free of Customs duty during the year commencing 1st August, 1939.

The allocation has been divided between Great Britain and Northern Ireland, and the monthly quantities of apples grown in Northern Ireland that may be sent to Eire free of duty are as follows:—

August, 1939	...	...	300 cwts.
September ,,	...	...	300 ,,
October ,,	...	...	300 ,,
November ,,	...	...	300 ,,
December ,,	...	...	500 ,,
January, 1940	...	...	600 ,,
February ,,	...	...	1,500 ,,
March ,,	...	...	3,000 ,,
April ,,	...	...	3,000 ,,
May ,,	...	...	1,500 ,,
June ,,	...	...	—
July ,,	...	...	—

In order to obtain exemption from Customs duty exporters must obtain a voucher issued by the Department of Agriculture, Dublin, which must accompany the relevant shipment, and the consignee in Eire must obtain from the Revenue Commissioners, Dublin Castle, a licence to import the apples. It has been arranged that vouchers in respect of apples produced in Northern Ireland will be distributed by the Ministry of Agriculture for Northern Ireland, Stormont, Belfast, and accordingly applications for such vouchers should be made to that Ministry. Applications should state the quantity, variety, name and address of the consignee, the probable number of consignments and the approximate dates of despatch.

Applications covering consignments for the month of August should be made before Monday, 31st July, and applications for subsequent months should be made to arrive not later than the 20th of the month preceding that in which it is desired to export.

PUBLICATIONS RECEIVED.

Pig Breeders' Annual, 1939-40, Volume, 19.

(Issued by the National Pig Breeders' Association).

Although, as stated in the editorial note, this annual is produced by a breed society, its perusal should prove of absorbing interest to pig producers generally, particularly in view of the steps being taken to encourage the production of home food supplies.

The Section devoted to the Review of the N.P.B.A. Bacon Carcass Competition, 1932-37, is dealt with in a most comprehensive manner, and the interest of Northern Ireland producers will in no way be lessened by the statement that "The entries in this competition have consisted to such an overwhelming extent of Large Whites, that it was impossible to obtain any interbreed comparisons".

Included in the volume also is a detailed survey of supplies, prices and marketing organisations in the pig industry, as well as an article on the history of development of production and marketing of feeding stuffs.

Reports of experimental work on pig husbandry and pig feeding at various centres are given in detail, as well as reviews of developments in the chief pig producing countries.

A contribution from Professor Craig, entitled "Animal Parasites on the Skin of Pigs" should prove of special interest.

Details are also given of further investigations into the treatment of piglet anaemia with iron salts. This article will be of interest to Ulster readers in view of the valuable work already carried out in this connection by the Ministry's Research Division.

Altogether an admirable volume and one which should find a place on the bookshelf of everyone interested in the pig industry.

SEVENTEENTH EGG LAYING TEST AT STORMONT.

The eleventh period of four weeks ended on the 4th August, 1939. There was the usual seasonal decrease in egg production. The total number of eggs laid by the competing birds was 9,840, which gives an average of 13.13 eggs per bird, as compared with 14.52 for the previous period, and 12.38 for the eleventh period of the previous test. Of the 9,840 eggs laid, 9,040 (91.86 per cent.) were scoring eggs, i.e., 2 oz. or over in weight.

The highest sectional average egg production during the eleventh period is to the credit of the Rhode Island Reds in Section 5, viz., 14.04 eggs per bird, the White Leghorns in Section 4 being next with an average of 13.75 eggs per bird.

The average egg production during the 44 weeks the test has been in progress, based on the original flock of 756 birds, was 164.89 eggs per bird, as compared with 161.82 for the corresponding 44 weeks of the previous test. The average production of the 676 birds alive at the end of the eleventh period was 176.97 eggs per bird.

Mortality.—Eighty of the 756 birds accepted for the test have died. This represents a rate of 10.58 per cent. which is 3.40 per cent. lower than the rate for the corresponding 44 weeks of the previous test. Thirty pens have each lost one bird, twelve pens have each lost two birds, six pens have lost three birds, and two pens have each lost four birds.

The number of deaths and percentage mortality in the different sections are as follows:—

Section	Breed	No. of Birds	No. of Deaths	Percentage Death Rate
1	White Wyandottes (Open)	120	5	4.17
2	,, ,, (Stationholders)	60	8	13.33
3	White Leghorns (Open)	60	14	23.33
4	,, ,, (Stationholders)	66	11	16.66
5	Rhode Island Reds (Open)	174	15	8.62
6	,, ,, ,, (Stationholders)	66	9	13.63
7	Any other breed	150	11	7.33
8	Clubs (Any Breed)	60	7	11.66

The mortality amongst the different breeds is as follows:—

Breed	No. of Birds	No. of Deaths	Percentage Death Rate
Rhode Island Red	282	30	10.64
White Wyandotte	198	14	7.07
White Leghorn	126	25	19.84
Brown Leghorn	12	1	8.3
Black Leghorn	6	—	—
Light Sussex	66	1	1.51
Buff Rock	42	7	16.66
Maran	6	2	33.3
Silver Grey Dorking	6	—	—
Welsummer	6	—	—
Ancona	6	—	—

The encouraging feature about this analysis is the low death rate amongst the Light Sussex. The White Wyandottes and the Rhode Island Reds also show a comparatively low death rate. The numbers of Brown Leghorns and Marans are too small to justify comment.

The following are particulars of the leading pens in each Section at the close of the eleventh period:—

SECTION 1. WHITE WYANDOTTES (Open). 20 Pens.

Position	No. of Pen	Name and Address of Owner	Number of Eggs laid				Test Score
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	11	Mr. J. Lenaghan, Tyconnett, Ballynahinch, Co. Down.	780	405	40	—	1,185
2	8	Mrs. D. C. Gamble, The Retreat, Coalisland, Co. Tyrone	550	572	74	—	1,122
3	16	Mrs. A. Peel, Oakleigh, Roses Lane Ends, Belfast.	644	459	45	—	1,103
4	1	Mrs. K. Bamforth, Melmount Road, Strabane, Co. Tyrone	861	237	15	—	1,098
5	12	Mr. J. Lenaghan, Tyconnett, Ballynahinch, Co. Down	680	409	25	—	1,089

SECTION 2. WHITE WYANDOTTES (Stationholders). 10 Pens.

1	30	Mrs. M. J. Veitch, Knockninney, Thompson's Bridge, Enniskillen	706	356	28	—	1,062
2	29	Miss A. Peel, Aghadalgon, Roses Lane Ends, Belfast	576	420	86	3	996
3	25	Miss A. Brown, Ballyhill, Crumlin, Co. Antrim	340	646	56	—	986

SECTION 3. WHITE LEGHORNS (Open). 10 Pens.

1	41	Mr. J. Waugh, Aldfreck, Ballycarry, Belfast	696	548	61	—	1,244
2	39	Mr. J. Telford, Drumarkin, Rathfriland, Co. Down	776	341	44	1	1,117
3	34	Mrs. H. M. Fletcher, Ashgrove, Lisadian, Hillsborough, Co. Down	422	529	60	—	951

SECTION 4. WHITE LEGHORNS (Stationholders). 11 Pens.

1	52	Mrs. J. Short, Tullyvalley, Seskinore, Omagh	566	564	131	2	1,130
2	47	Miss I. Gilmer, Rashee, Ballyclare, Co. Antrim	314	750	124	1	1,064
3	48	Mr. P. King, Leitrim P.O., Banbridge, Co. Down.	502	467	94	—	969

SECTION 5. RHODE ISLAND REDS (Open). 29 Pens.

Position	No. of Pen	Name and Address of Owner	Number of Eggs laid				Test Score
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	66	The Marquis of Hamilton, Baronscourt, Omagh, Co. Tyrone	549	624	51	1	1,173
2	67	Miss J. A. Irwin, Mount Irwin, Tynan, Co. Armagh	293	814	129	2	1,107
3	61	Mrs. E. R. Dunwoody, Benmore, Islandmagee, Co. Antrim	281	784	111	2	1,065
4	72	Mrs. J. M'Neill, Drain's Bay, Larne, Co. Antrim	693	350	19	3	1,043
5	68	Miss E. E. Kennedy, Tullyreagh, Glarryford, Co. Antrim	311	723	44	—	1,034

SECTION 6. RHODE ISLAND REDS (Stationholders). 11 Pens.

1	89	Miss S. M'Kee, Ardmillan House, Killinchy, Co. Down	403	754	123	4	1,157
2	83	Mrs. H. H. Dickson, Lower Coagh, Co. Tyrone	490	659	79	—	1,149
3	86	Miss E. M'Clelland, Ballynashee, Ballyclare, Co. Antrim	310	807	44	—	1,117

SECTION 7. ANY OTHER PURE BREED. 25 Pens.

1	113	Mr. R. Holmes, Killykergan, Coleraine. (Black Leghorn)	429	579	176	4	1,008
2	106	Mr. R. Holmes, Killykergan, Coleraine. (Buff Rock)	316	678	227	4	994
3	107	Mr. R. Holmes, Killykergan, Coleraine (Buff Rock)	427	545	252	5	972
4	93	Mrs. M. Benson, Killymoon, Cookstown, Co. Tyrone (Light Sussex)	653	305	133	—	958
5	112	Mrs. K. Bamforth, Melmount Road, Strabane, Co. Tyrone (Brown Leghorn)	175	680	194	1	855

SECTION 8. CLUB ENTRIES. 10 Pens.

Position	No. of Pen	Name and Address of Owner.	Number of eggs laid				Test Score
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	126	Portadown Poultry Club, Armagh (Rhode Island Reds)	173	955	141	1	1,128
2	120	Ballywalter Young Farmers' Club, Co. Down. (Rhode Island Reds)	339	676	81	—	1,015
3	127	Ballywalter Young Farmers' Club (White Wyandottes)	421	528	65	3	949

"Test Score" means the total of the super-grade and first-grade eggs.

Pen No. 41 of White Leghorns in Section 3, entered by Mr. J. Waugh, is now in the leading position in the list. Second place has been taken by Mr. J. Lenaghan's Pen No. 11 of White Wyandottes in Section 1, while The Marquis of Hamilton's Pen No. 66 of Rhode Island Reds in Section 5 is third.

OFFICIALLY BRED POULTRY.

The 1939 Stud Book of the official Pedigree Poultry Breeding Station is now published, and copies may be had free of charge from The Secretary, Agricultural Research Institute, Hillsborough, Co. Down.

The pedigrees, with full records, of birds bred at the Station in 1939 are set out in the Stud Book, and also the names and addresses of the owners of the birds. The Stud Book will, therefore, be valuable to poultry breeders in indicating where cockerels or foundation stock with guaranteed records of high productivity behind them may be obtained. The majority of the owners of these officially bred birds still have a number for sale, and intending purchasers should note that selling classes for such birds are provided at the Royal Ulster Agricultural Society's Show and Sale at Balmoral, on Wednesday and Thursday, 20th and 21st September, at which the birds will be sold by public auction. The breeders should note this also, and enter birds for the Show and Sale.

AGRICULTURAL INDEX NUMBERS.

Monthly Index Numbers of Prices of Individual Commodities.

(Corrected for Seasonal Variation).

(Base 1927-29 = 100).

Commodity	1939				1938	1937
	July	June	May	April	July	July
Cattle : Fat ...	82†	82	81	81	82	89
Store ...	90	87	86	88	90	95
Cows : Fat ...	68	65	73	71	69	75
Sheep and Lambs: Fat	49	50	55	51	60	68
Bacon Pigs ...	81†	80†	74	74	89	87
Hens and Chickens	66	74	74	73	66	71
Ducks	89	88	99	87	88	101
Eggs	97	112	98	105	115	107
Milk : For Manufacture	*	88	85	89	87	83
Whole ...	125	121	115	118	129	125
All	*	96	95	103	98	94
Farmers' Butter ...	81	79	80	75	89	74
Wool	70	66	—	—	47	112
Potatoes ...	78	67	91	108	168	161
Oats	61	61	63	66	87	89
Hay	83	83	80	79	76	96
Oat Straw ...	81	94	85	88	81	103

Revised Index Numbers taking Account of Payments under the Cattle Subsidy, and Government Payments for Milk.

Cattle : Fat ...	95†	94	93	94	94	100
Milk : For Manufacture	*	107	100	99	109	100
All	*	110	105	108	114	106

* Not yet available. † Provisional.

Monthly Index Numbers of Prices of Individual Commodities

(Uncorrected for Seasonal Variation).

(Base 1927-29 = 100).

Commodity	1939				1938	1937
	July	June	May	April	July	July
Cattle : Fat ...	85†	87	87	85	85	92
Store ...	93	91	88	89	93	97
Cows : Fat ...	66	67	76	74	68	74
Sheep and Lambs: Fat	48	53	63	61	58	66
Bacon Pigs ...	78†	80†	81	81	86	85
Hens and Chickens	64	73	77	78	63	68
Ducks	89	87	98	85	89	101
Eggs	83	80	61	63	95	87
Milk : For Manufacture	*	73	75	88	75	70
Whole ...	104	104	104	121	104	96
All	*	81	84	104	82	77
Farmers' Butter ...	74	75	80	79	81	67
Wool	67	64	—	—	46	110
Potatoes ...	68	72	96	104	145	146
Oats	67	66	67	68	96	100
Hay	90	88	81	81	81	103
Oat Straw ...	80	88	83	89	79	100

Revised Index Numbers taking Account of Payments under the Cattle Subsidy, and Government Payments for Milk.

Cattle : Fat ...	98†	100	99	98	97	103
Milk : For Manufacture	*	89	88	98	94	85
All	*	93	93	109	97	88

* Not yet available. † Provisional.

PRICES USED IN THE CALCULATION OF THE INDEX NUMBERS.

Commodity	1927-29	1939				1938	1937
		July	June	May	April	July	July
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Cattle :							
Fat, per live cwt. ...	45 2	38 6†	39 5	39 2	38 5	38 5	41 7
Store, per head	223 7	208 2	203 0	196 10	198 5	207 10	216 11
Cows :							
Fat, per head	336 10	223 6	225 10	254 7	248 8	227 5	247 8
Sheep & Lambs :							
Fat, per head	53 6	25 5	28 3	33 7	32 8	31 1	35 1
Bacon Pigs, per dead cwt. ...	78 8	61 7†	62 11†	63 4	63 8	67 6	66 7
Hens & Chickens per head ...	3 0½	1 11¼	2 2¾	2 4¼	2 4½	1 11	2 0¾
Ducks, per head	2 6½	2 3¼	2 2½	2 5¾	2 1¾	2 3¼	2 6¾
Eggs, per 120 ...	13 6	11 2	10 9	8 2	8 5	12 10	11 8
Milk :							
For Manufacture, per gal.	0 6¼	*	0 4½	0 4¾	0 5½	0 4¾	0 4½
Whole, per gal.	1 0	1 0½	1 0½	1 0½	1 2½	1 0½	0 11½
Farmers' Butter, per lb. ...	1 5½	1 1	1 1	1 2	1 1¾	1 2¼	0 11¾
Wool, per lb. ...	0 11	0 7¼	0 7	—	—	0 5	1 0
Potatoes, per cwt.	3 5	2 4	2 5	3 3	3 6	4 11	4 11
Oats, per cwt.	8 1	5 5	5 4	5 5	5 6	7 9	8 1
Hay, per ton ...	73 8	66 0	64 10	59 7	59 6	60 0	76 0
Oat Straw, per ton ...	47 6	37 9	41 11	39 8	42 5	37 5	47 3

* Not yet available. † Provisional.

MINISTRY OF LABOUR RETAIL PRICES AND INDICES.

The Ministry of Labour general index of retail prices of food in Great Britain and Northern Ireland at July 1st was 39 per cent. over the level of July, 1914, or 5 points above that of last month, but 7 points lower than at July 1st, 1938. This increase was due mainly to the displacement of old potatoes by the new crop at higher rates, and to advances in the average prices of eggs and milk.

The following table shows the average retail prices of certain foods in large towns and villages on July 1st, 1939, June 1st, 1939, and July 1st, 1938, with the corresponding increases over July, 1914.

Article.	July, 1st 1939	June, 1st 1939	July, 1st 1938	Increase over July, 1914.		
				July, 1st 1939	June, 1st 1939	July, 1st 1938
	Per lb. s. d.	Per lb. s. d.	Per lb. s. d.	Per cent.	Per cent.	Per cent.
Beef, British—						
Ribs	1 2¼	1 2¼	1 2½	43	43	46
Thin Flank	0 7½	0 7½	0 7¾	15	15	18
Beef, Chilled or Frozen—						
Ribs	0 9½	0 9½	0 9½	30	30	33
Thin Flank	0 4¾	0 4¾	0 5	Nil	Nil	4
Mutton, British—						
Legs	1 3½	1 3½	1 3¾	48	49	51
Breast	0 7½	0 7½	0 7¾	15	17	20
Mutton, Frozen—						
Legs	0 10¼	0 10¼	0 10¼	48	49	52
Breast	0 4	0 4	0 4¼	—4*	—3*	1
Bacon (Streaky) ...	1 2¾	1 2¾	1 3¼	31	31	37
Butter—						
Fresh	1 4	1 3¾	1 4¾	10	9	14
Salt	1 3	1 2½	1 3½	5	2	10
Cheese	0 10	0 10	0 10¾	14	15	24
	Per qt.	Per qt.	Per qt.			
Milk	0 6½	0 6¼	0 6¾	88	80	91
	Each	Each	Each			
Eggs (Fresh)	0 1¾	0 1¼	0 1¾	33	8	32
	Per 4 lb.	Per 4 lb.	Per 4 lb.			
Bread	0 8½	0 8½	0 9	46	46	56
	Per 7 lb.	Per 7 lb.	Per 7 lb.			
Flour	1 1¾	1 1¾	1 3¼	30	30	44
Potatoes	0 9¾	0 6½	1 0½	100	35	158

* Decrease.

The cost of maintaining unchanged the per-War standard of living of working-class families at July 1st was approximately 56 per cent. above the level of July, 1914, as compared with 53 per cent. at June and 59 per cent. a year ago.

PRICES OF FEEDING STUFFS AT SPECIFIED CENTRES.

The following table shows the retail cash prices per cwt. of Feeding Stuffs at 1st August, 1939, in ten representative centres in Northern Ireland.

	Antrim	Armagh	Ballymena	Belfast	Coleraine	Dungannon	Enniskillen	Newry	Omagh	Strabane
Protein Foods :	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Linseed (whole)	—	16 0	16 0	16 0	18 0	—	16 0	—	—	—
Linseed Cake, home-made ...	10 10½	12 0	10 6	11 0	12 6	13 0	11 6	—	12 0	—
Linseed Cake, foreign	—	11 6	10 0	10 0	12 0	11 0	10 6	—	11 0	10 3
Linseed Cake Meal	10 10½	12 0	10 0	10 3	12 0	12 0	11 9	11 0	11 0	11 0
Cotton Cake, decorticated ...	—	—	9 0	10 0	9 6	9 3	10 6	—	9 6	9 6
Earthnut Cake, decorticated ...	8 9	—	9 0	9 0	9 0	9 0	8 6	—	9 0	—
Soya Bean Meal (extracted) ...	10 0	10 6	11 0	10 0	11 0	10 6	11 6	—	10 6	11 0
Fish Meal (60% protein) ...	16 6	17 0	16 6	16 6	16 6	17 0	17 0	16 6	16 9	16 6
Meat Meal (60% protein) ...	16 6	15 0	13 3	13 3	16 6	15 6	—	—	15 0	16 0
Meat and Bone Meal (40% protein)	—	10 0	9 6	9 0	10 6	9 0	10 6	—	—	10 0
Medium Protein Foods :										
Palm Kernel Cake	9 0	—	8 6	7 6	8 0	—	—	—	9 0	—
Palm Kernel Meal	9 0	—	8 6	7 6	8 0	—	—	—	9 0	—
Starchy Foods :										
Maize (whole)	6 0	6 3	6 6	6 0	6 6	6 6	6 6	—	6 0	6 3
Maize Meal	6 6	6 6	6 6	6 0	6 6	6 7½	6 6	7 0	6 6	6 6
Maize Flaked	7 0	7 0	7 0	6 6	7 0	7 4½	7 6	7 6	7 6	7 6
Wheat (whole)	6 0	6 6	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0
Bran, Red	7 0	7 0	6 6	7 0	7 0	7 0	8 0	7 0	7 6	6 9
Bran, White	8 0	8 0	8 0	8 6	8 6	8 6	9 0	8 0	9 0	9 6
Pollard, Brown	7 0	7 0	6 6	7 0	6 9	7 0	7 6	7 0	7 3	7 0
Pollard, White	—	8 0	7 0	8 3	7 0	8 3	8 0	7 9	8 3	8 6
Barley Meal	7 0	7 0	7 0	7 0	7 0	7 0	7 6	6 9	7 0	7 3
Tapioca Root Flour	—	—	6 6	6 0	—	—	7 6	—	—	—
Oats (whole)	7 6	7 0	6 0	7 0	6 0	7 0	7 6	6 0	5 3	5 3
Crushed Oats	8 0	7 6	6 6	7 6	6 6	7 6	8 2	6 6	6 6	6 3

Non-Concentrates :—The average prices at representative markets at the beginning of August, 1939, were as follows :—Potatoes (New Crop), 3/8½ per cwt.; Upland Hay, 70/- per ton; Meadow Hay, 57/- per ton; Oat Straw, 40/5 per ton.

AVERAGE PRICES OF FEEDING STUFFS.

The following table shows the average retail prices per cwt. of feeding stuffs at 1st August, 1939, with comparative prices as at the first of the previous month; the costs per unit of protein equivalent and of starch equivalent are also given in respect of each month.

	Protein Equivalent	Starch Equivalent	Average price per cwt. at 1st August, 1939	Average price per cwt. at 1st July, 1939	Cost of unit of protein equivalent: August	Cost of unit of protein equivalent: July	Cost of unit of starch equivalent: August	Cost of unit of starch equivalent: July
Protein Foods			s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Linseed	18.75	119.2	16 5	16 4	17 6	17 5	2 9	2 9
Crushed linseed	18.75	119.2	17 8	17 7	18 10	18 9	3 0	3 0
Linseed cake (home made)	24.6	74.0	11 8	11 10	9 6	9 8	3 2	3 2
Linseed cake (foreign)	27.05	74.5	10 9	10 11	7 11	8 1	2 11	2 11
Linseed cake meal	24.6	74.0	11 2	11 5	9 1	9 3	3 0	3 1
Decorticated Cotton cake	34.65	68.4	9 7	9 9	5 6	5 7	2 10	2 10
Decorticated Earthnut cake	41.3	73.0	8 11	8 10	4 4	4 3	2 5	2 5
Extracted Soya bean meal	38.3	64.0	10 8	10 6	5 7	5 6	3 4	3 3
Fish meal (60% protein)	53.0	58.9	16 8	16 8	6 3	6 3	5 8	5 8
Meat meal (60% protein)	55.0	61.0	15 2	15 2	5 6	5 6	5 0	5 0
Meat & bone meal (40% protein)	36.0	44.0	9 9	9 6	5 5	5 3	4 5	4 4
Medium Protein Foods								
Palm Kernel cake	16.95	73.2	8 5	8 4	9 11	9 10	2 3	2 3
Palm Kernel meal	16.55	71.3	8 5	8 4	10 2	10 1	2 4	2 4
Starchy Foods								
Maize	7.65	77.6	6 3	6 6	16 4	17 0	1 7	1 8
Maize meal	7.65	77.6	6 6	6 9	17 0	17 8	1 8	1 9
Flaked maize	9.2	84.0	7 2	7 5	15 7	16 2	1 8	1 9
Wheat	9.6	71.6	6 1	6 5	12 8	13 4	1 8	1 10
Red bran	10.0	42.6	7 1	7 3	14 2	14 6	3 4	3 5
White bran	10.0	42.6	8 6	8 8	17 0	17 4	4 0	4 1
Brown pollard	10.85	56.5	7 0	7 3	12 11	13 4	2 6	2 7
White pollard	10.85	56.5	7 11	8 2	14 7	15 0	2 10	2 11
Barley meal	7.3	71.4	7 1	7 6	19 5	20 6	2 0	2 1
Oats	7.6	59.5	6 5	6 6	16 11	17 1	2 2	2 2
Crushed oats	7.6	59.5	7 1	7 2	18 8	18 10	2 5	2 5
Tapioca root flour	1.2	83.5	6 8	6 10	111 1	113 11	1 7	1 8
Non-Concentrates								
Potatoes	0.85	18.5	3 8½	2 5½	87 3	57 10	4 0	2 8
Upland Hay	4.9	29.0	3 6	3 5¾	14 3½	14 1½	2 5	2 5
Meadow Hay	4.7	37.0	2 10¼	2 10¼	12 1¾	12 1¾	1 6½	1 6½
Oat Straw	0.5	21.0	2 0¼	1 10¼	80 10	74 2	1 11	1 9

The object of the foregoing tables, besides providing information regarding the prices of feeding stuffs and the trend of prices, is to give purchasers a

guide as to the economic purchase of supplies. It should be understood that the price per ton is not a sound basis on which to judge whether or not a particular food or grade of a particular food is good value for money. The composition of the foods is the only basis on which different grades can be compared. The value of foods of different kinds, but of the same nature in reference to market prices, can also be compared on this basis.

In the case of an artificial manure which supplies only one fertilising ingredient as, for example, sulphate of ammonia, which supplies nitrogen, the cost of the unit of nitrogen at the price charged can be determined quite readily by dividing the price per ton by the percentage of nitrogen in the sample, and the figure thus obtained is the cost of a unit of nitrogen. By this method the most economical source of nitrogen can be ascertained. Similarly, in the cases of phosphatic and potassic manures.

With feeding stuffs, however, the same method cannot be applied to determine comparative values. This is because every feeding stuff contains three important food constituents in varying proportions. These are (1) carbohydrates, (2) oils or fats, and (3) proteins or albuminoids. The carbohydrates comprise a group of substances such as starch, sugar and cellulose. These substances supply heat or energy to the animal, and the surplus goes to form fat. They are the fuel which the animal requires to keep the body "fires" burning. The oils of a feeding stuff are also heat and energy suppliers, and the surplus is stored as fat. The oils are approximately 2½ times more valuable than the carbohydrates as heat and energy producers, but excess in a ration may lower its digestibility and cause digestive troubles. The proteins are the most valuable and most expensive food constituent. They contain nitrogen and are the part of the food from which products which contain protein are chiefly made. Thus the protein products, such as lean meat, milk and eggs, are formed principally from protein, and young, growing animals, dairy cows and laying hens must have an adequate quantity of protein for full growth, development and production.

While all animals require a certain amount of carbohydrates, oils and proteins, the relative amounts depend on the class of stock. For example, a two-year-old fattening bullock requires much less protein than a dairy cow in milk and a fattening chicken less than a laying pullet.

There are wide differences in the composition of the different kinds of feeding stuffs. Some are rich in carbohydrates and, therefore, particularly valuable for fattening purposes. These include oats, maize, barley and wheat, and their products. Others are rich in protein and are valuable for producing flesh, milk and eggs. These include decorticated cotton cake, decorticated earthnut cake, meat meal and soya bean meal.

In the following table the composition of some of the commonly used feeding stuffs is shown—

	Water.	Protein.	Oil.	Carbohydrates.
Non-Concentrates				
Swede turnips ...	88	1	0.2	9
Potatoes	75	2	0.1	21
Cabbage	89	1.5	0.5	8
Oat Straw	14	4	2	37
Meadow hay ...	10	10	3	45
Pasture grass ...	80	3.5	0.8	10
Fattening Foods				
Crushed oats ...	13	9	6	60
Maize meal ...	12	10	4	70
Barley meal ...	13	12	2	66
Pollard	13	15	5	57
Flesh forming foods				
Decorticated Cotton cake	9	40	9	26
Decorticated Earthnut cake	10	46	7	23
Meat meal	11	60	6	—
Soya bean meal ...	11	44	1.5	32

The problem confronting the purchaser of feeding stuffs, who is concerned with the business of getting best value for money, is one which is much more difficult to solve than is the case with artificial fertilisers. There are at least four aspects of the problem to be considered:

(1) The quality of the different foods offered for sale. This can be determined by reference to the particulars of composition which a seller must give a purchaser in accordance with the Fertilisers and Feeding Stuffs Act.

(2) The physical condition of the foods, and if fresh or stale.

(3) The suitability of the foods for the purpose in view.

(4) The comparative values of the foods at the prices quoted.

The chief concern of this section of the Report is comparative values and, therefore, that aspect of the problem will be considered specifically.

The proteins play a part in the nutrition of the animal which cannot be taken by either carbohydrates or oils. In addition to this, the proteins, carbohydrates and oils have very different values for the production of energy or fat. It therefore follows that the simple procedure of totalling the percentages of these three ingredients and dividing this total into the price per ton in order to obtain a value for a unit of the food-stuff is quite unsound. Various methods have been used to compare the values of different feeding stuffs, but none is completely satisfactory. For practical purposes the least cumbersome is the

method whereby the food-stuffs are placed in groups of similar composition, and the values of the members of each group are then compared by consideration of (a) their protein equivalents, and (b) their starch equivalents. The starch equivalent is the number of pounds of starch which would be required to produce the same amount of "fat" in an animal as 100 pounds of the food-stuff in question. It is essentially a measure of the fat-producing value of the food-stuff. The protein equivalent is the number of pounds of digestible true protein, plus half the number of pounds of non-protein nitrogenous substances such as amides, present in 100 pounds of the foodstuff. It is a measure of the value of the food-stuff to the animal as a source of protein.

By this method all foods can be reduced to comparable standards based on (1) the protein equivalent, and (2) the starch equivalent.

The next stage in comparing values is to determine the cost of a unit of protein equivalent and of starch equivalent in the different foods which are being compared, and to enable the reader to do this the protein and starch equivalent figures for the different foods are given in the table on page 271, and also the cost per unit of protein equivalent and of starch equivalent in each case. These costs have been determined by dividing the protein equivalent figure and the starch equivalent figure, respectively, into the current price per ton, and the lower the quotient figures thus obtained the cheaper is the particular food as a source of protein or of starch equivalent as the case may be.

However, it would be quite misleading to compare the cost of a unit of protein equivalent in a protein food (which is purchased principally for its protein) with the cost of a similar unit in a starchy food. In other words, foods such as maize meal and pollard cannot be compared on the basis of cost of protein equivalent with foods such as decorticated cotton cake and meat meal.

The best course to adopt is to consider for what purpose the particular food is required, decide what foods are suitable for that purpose, examine the samples of these different foods which are offered and, if all appear to be satisfactory, apply the unit value system of determining which one provides protein equivalent or starch equivalent at the cheapest rate. A few examples may be helpful in explaining the procedure.

(1) Suppose it is intended to purchase a protein food for the purpose of balancing a ration for dairy cows. The protein foods suitable for dairy cows are decorticated cotton cake, decorticated earthnut cake and soya bean meal. From the table on page 271 it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows :—

Decorticated cotton cake	...	...	5/6d.
Decorticated earthnut cake	...	...	4/4d.
Soya bean meal	...	...	5/7d.

Accordingly decorticated earthnut cake is the cheapest source of protein.

(2) A protein food is required as a milk substitute to balance the ration for fattening pigs. The foods suitable for this purpose are soya bean meal, meat meal and meat and bone meal. Referring again to the table, it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

Soya bean meal	...	...	5/7d.
Meat meal (60% protein)	...	...	5/6d.
Meat and bone meal (40% protein)		...	5/5d.

This shows that at the respective prices per ton ruling at present, all three supply protein at about the same cost. It should be noted, however, that in the case of meat meal and meat and bone meal, the former should be used in preference to the latter, since 1 cwt. of it in the meal mixture will provide as much protein as $1\frac{1}{2}$ cwt. of the latter. Besides, having usually a lower content of oil than the 40% protein grade, the 60% meat meal is likely to prove more satisfactory than the lower grade, both from the thriving point of view and as regards producing bacon of good quality. The use of the lower grade of meat and bone meal in mixtures for the feeding of pigs is not recommended.

(3) Whether is it more economical to feed white pollard than brown pollard or white bran than red bran, even though the prices per ton of the white grades are higher than those of the brown or red grades? The figures in the table show that the cost of both the unit of protein equivalent and of starch equivalent is less for the brown pollard than the white, and less for the red than the white bran. It follows, therefore, that at current prices the coloured grades of pollard and bran are cheaper than the white grades. It should be remembered in this connection, however, that the comparison of costs in these cases has been made on the assumption that the composition of the coloured grades is the same as that of the white grades. A pollard containing say, 8 per cent. fibre, even if of a white colour, would have a far lower feeding value than one containing only 4 per cent. of fibre. Colour is not a guide as to the feeding value of pollard or bran.

TRADE AND PRICES OF LIVE STOCK AT BELFAST AUCTION MARTS.

Supplies of beef cattle at the Belfast Auction Marts during the month of July were much heavier than in June, the increase occurring chiefly in the second half of the month. June price levels were fairly well maintained up to the last week of July, when the average quotation suffered a reduction to 37/- per live cwt. The over-all average price for the month was 10d. lower than in June at 38/1d. per live cwt. Prices were again low in the first week of August, when the general range was from 34/- to 38/- per live cwt.

The following table shows the average prices for fat cattle during last month compared with those ruling at the corresponding dates a year ago:—

Week ended		*per cwt.*	*Week ended*		*per cwt.*
8th July, 1939	...	39/2	9th July, 1938	...	38/11
15th ,, ,,	...	38/4	16th ,, ,, ...	...	39/3
22nd ,, ,,	...	38/4	23rd ,, ,, ...	...	37/9
29th ,, ,,	...	37/–	30th ,, ,, ...	...	37/1
Average for month	...	38/1	Average for month	...	38/2
5th August, 1939	...	35/8	6th August, 1938	...	35/–

The supply of store cattle during the month was reduced, most of the usual vendors being busy with their crops. The improvement in pastures had a beneficial effect on trade, and cross-Channel and local buyers competed briskly for stock, especially towards the close of the month, when price increases were recorded. On the first sale day of August the following were the price ranges of store cattle:—Good large forward stores, £13 10s. 0d. to £15; six-quarter-olds, £11 15s. 0d. to £13 5s. 0d.; yearlings, £10 to £12 10s. 0d.; and calves, £7 10s. 0d. to £12.

Dairy cattle were also in smaller supply last month. Demand opened better than in June, and the improvement continued all month. On average, prices rose about 5/- per head on the month, but in the last week price levels were as much as £1 to 30/- in excess of those paid in June.

Fat cows and bulls were in somewhat similar supply to a month earlier, and prices fell away at the close to much lower levels in sympathy with the decline in beef values.

Fat sheep and lambs were in seasonally heavier supply, and a fairly good enquiry was passing in this end. A good seaside trade was done, especially from the middle of July, and with shipping merchants also active, good clearances were effected. Prices, however, were lower than in June, and at the close of the month reductions of about 5/- per head were of frequent occurrence.

Price ranges for fat cows, store cattle, dairy cattle and fat sheep and lambs during each week of July are shown in the table on the next page.

ACCOUNT OF TRADE AT FAIRS.

The supply of store cattle at fairs in Northern Ireland last month showed a considerable seasonal reduction, as compared with the numbers recorded for June. A note of uncertainty was evident at the beginning of the month, when business was slow, but the improved state of pastures gave graziers greater scope, and their purchases increased accordingly. The seasonal decline in beef prices was, however, inclined to offset this, but on the whole trade was improved. As usual shippers bought up a large proportion of the offerings. Best forward cattle were sometimes dearer but, in the main, the prices remained steady at about the June levels.

The supply of fat cattle was not substantially changed, and was about the same as in July, 1938. With the decline in trade, and prices, as is usual at this time of year, business was slacker than in June. The quality and condition of cattle were up to the usual standards, but with demand easier prices fell, in some cases by as much as 2/6d. per live cwt. on the month. Good medium weight cattle of from 8 to 9 cwts. were in favour, but even for these values tended easier.

Dairy cattle were in slightly smaller number in July, but trade continued good and prices were well maintained. Good young cows and heifers were frequently quoted dearer than in June. All cattle likely to prove good milkers met a ready sale and only rough cattle and those with bad udders were hard to cash.

Fat lambs were offered in much larger number than in June. A good brisk demand was experienced, and clearances were made at most centres, but sellers had to accept lower prices than a month earlier. This year's prices for fat lambs are lower than those of a year ago. Small numbers of fat sheep were slow to sell and cheaper.

Young pigs were in smaller number at fairs last month. Demand continued rather dull, and clearances were not easy to make. Prices finished lower than in June.

Small numbers of brood sows at a few centres last month were a slow trade, sales being hard to effect for less money. Only the best Yorks and York crosses were in demand.

PRICES OF OTHER STOCK AT THE BELFAST AUCTION MARTS.

Description		Week ended 8–7–39	Week ended 15–7–39	Week ended 22·7–39	Week ended 29·7–39
Fat Cows	Range of 1st quality	£14 to £18-12-6	£14 to £17	£13 to £18-15	£13 to £17
	,, 2nd ,,	£9 to £13	£10 to £13-10	£9 to £13-10	£9 to £14
Store Cattle :					
Large Forward Stores ...	Range of 1st quality	£14-10 to £16-10	£14-10 to £15-15	£13 to £14-10	£14 to £15-2-6
	,, 2nd ,,	£13-5 to £14-5	£12-15 to £14	£12 to £12-15	£12-10 to £13-15
Younger Stores	,, 1st ,,	£11 to £13	£10-10 to £12	£10 to £11-10	£10 to £12
	,, 2nd ,,	£8 to £10	£7-10 to £9-15	£7-5 to £9-10	£7-10 to £9-10
Dairy Cattle :					
Milch Cows	Range of 1st quality	£20 to £25-10	£20 to £24-10	£21 to £27	£21 to £27
	,, 2nd ,,	£16 to £19	£16 to £19	£15 to £19	£15 to £19
Springers	,, 1st ,,	£19 to £23-15	£18 to £20	£17 to £18-10	£18 to £12-10
	,, 2nd ,,	£16 to £18	£15 to £18	£15 to £16-10	£16 to £17-10
Sheep and Lambs :					
Crossbred and White Ewes ...	Range of 1st quality	30/- to 40/–	31/– to 40/–	28/– to 37/–	28/– to 38/6
	,, 2nd ,,	24/– to 33/–	22/– to 34/–	24/– to 31/–	24/– to 32/–
Blackface Ewes	,, 1st ,,	23/– to 33/–	25/– to 35/–	25/– to 32/–	24/– to 35/–
	,, 2nd ,,	18/– to 27/–	20/– to 27/–	19/– to 25/–	16/– to 27/–
Crossbred and White Lambs ...	,, 1st ,,	30/– to 40/–	32/– to 43/–	32/– to 42/–	30/– to 40/–
	,, 2nd ,,	24/– to 32/6	25/– to 34/–	25/– to 34/–	25/– to 31/–
Crossbred and White Hoggets	,, 1st ,,	31/– to 35/6	27/– to 35/–	30/– to 36/–	——
	,, 2nd ,,	25/– to 30/–	22/– to 26/–	25/– to 29/–	——
Rams	,, 1st ,,	28/– to 40/–	30/– to 40/–	30/– to 40/–	32/– to 40/–
	,, 2nd ,,	22/– to 35/–	26/– to 34/–	25/– to 34/–	27/– to 34/–

PRICES OF LIVE STOCK.

Average prices of Live Stock at Fairs during the month of July, 1939.

Date	Fair	Calves (under 9 months)	Store Cattle	Fat Cattle (18 months and over)	Springers		Milch Cows	Fat Lambs (under 12 months)	Young Pigs
					Cows	Heifers			
		Per head	Per cwt.	Per cwt.	Per head	Per head	Per head	Per head	Per head
		£ s.	Live weight	Live weight	£ s.	£ s.	£ s.	£ s.	£ s.
4	Omagh	5 10	37/6 to 40/–	38/–	15 0	13 10	13 0	†1 10	—
5	Londonderry	—	35/– to 41/–	37/–	16 0	15 0	—	—	1 5
5	Rathfriland	6 19/6	36/– to 40/–	37/–	16 0	16 0	15 10	†1 5/3	1 8/9
								‡0 19/6	
6	Strabane	6 0	37/– to 38/6	37/–	12 10	13 0	13 15	—	—
7	Moy	—	35/– to 41/–	37/–	15 12/6	15 2/6	14 15	—	—
8	Irvinestown	7 3/3	35/6 to 37/–	38/–	14 10	13 10	14 0	*1 7/6	1 13
10	Enniskillen	6 11/6	32/– to 38/–	35/–	14 10	14 0	12 10	*1 7	1 12
10	Limavady	—	35/– to 40/–	36/–	16 10	—	—	—	1 7
11	Kilrea	6 6	34/– to 41/–	37/–	15 0	15 0	16 0	†1 10	1 7/6
12	Crossgar	—	37/– to 38/–	—	—	17 0	—	—	—
14	Ballygawley	—	28/6 to 41/–	37/–	13 0	—	12 15	—	1 15
15	Portadown	6 0	35/– to 38/–	37/6	17 0	16 0	16 0	—	1 15
17	Camlough	—	36/6 to 41/6	36/6	16 0	14 15	12 10	†1 5	—
18	Claudy	—	35/– to 41/–	38/	15 10	14 5	—	—	1 7
19	Lisnaskea	5 17/9	30/– to 36/6	35/–	16 0	16 0	14 0	—	1 11
20	Ballymoney	7 5	36/6 to 40/–	—	15 0	13 15	13 0	†1 8	1 11/6
20	Ballynahinch ..	—	37/– to 38/–	—	17 0	16 0	15 10	—	1 15
21	Moneymore	7 1	38/– to 42/6	35/–	15 0	14 0	15 0	†1 5	1 8/6
22	Fintona	6 18/6	37/6 to 40/–	36/–	16 0	15 0	14 10	†1 5	1 9
27	Antrim	—	37/– to 41/–	36/	20 0	18 0	—	—	1 5
28	Castlederg	6 0	35/– to 37/–	35/–	—	—	—	†1 5	1 5
28	Killylea	—	28/6 to 40/–	36/–	14 15	—	14 0	—	—
29	Ballymena	7 2/6	33/– to 42/6	—	21 10	19 0	20 10	—	1 10

* Long Wools. † Downs and Crossbreds. ‡ Mountain.

SHIPMENTS OF LIVE STOCK.

Statement showing the Shipments of Live Stock from Northern Ireland Ports during the following periods:—
Months of July, 1939, June, 1939, July, 1938; Seven months ended 31st July, 1939, and 31st July, 1938.

PORTS OF :—	CATTLE						SHEEP				PIGS			HORSES
	Fat	Stores	Milch Cows	Springers	Calves	Total	Fat	Stores	Lambs	Total	Fat	Stores	Total	
Belfast	3,208	4,319	1,583	161	—	9,271	—	—	10,049	10,049	2,641	—	2,641	205
Larne	31	1,891	104	33	—	2,059	—	—	9,264	9,264	1,842	868	2,710	88
Londonderry ...	171	5,433	114	124	412	6,254	101	—	9,079	9,180	419	—	419	13
Newry	24	219	—	—	—	243	2	—	377	379	—	—	—	—
Total, July, 1939 ...	3,434	11,862	1,801	318	412	17,827	103	—	28,769	28,872	4,902	868	5,770	306
Total, June, 1939 ...	3,291	11,211	1,687	149	1,356	17,694	43	4	14,740	14,787	5,852	453	6,305	490
Total, July, 1938 ...	3,378	10,267	1,612	377	234	15,868	43	—	25,053	25,096	5,044	356	5,400	303
Total for seven months ended 31st July, 1939	35,700	100,590	9,033	962	5,596	151,881	8,368	4	48,881	57,253	32,098	1,487	33,585	2,174
Total for seven months ended 31st July, 1938	32,975	89,987	8,486	1,171	2,709	135,328	14,445	—	41,220	55,665	50,227	1,188	51,415	1,922

IMPORTS AND EXPORTS.

Table showing the Imports and Exports through Northern Ireland ports of certain Agricultural Products during the month ended 30th June, 1939, and the six months ended 30th June, 1939, with comparative figures for the corresponding periods in 1938. This information also includes trade with Eire across the land boundary.

(These figures are supplied through the courtesy of the Ministry of Commerce and are subject to revision).

COMMODITY	IMPORTS				EXPORTS			
	Month ended 30th June.		Six Months ended 30th June.		Month ended 30th June.		Six Months ended 30th June.	
	‡1939	1938	‡1939	1938	‡1939	1938	‡1939	1938
Bacon ... ... cwts.	1,210	4,087	20,841	21,716	42,849	32,660	248,351	184,771
Hams ... ... cwts.	946	1,552	5,640	8,347	11,435	12,628	63,092	68,997
Pork ... ... cwts.	——	35	759	696	2,657	3,235	22,028	15,813
Butter ... ... cwts.	7,829	17,625	82,738	105,706	250	216	977	1,279
Eggs ... ... Gt. hds.	8,989	120,467	491,540	654,868	405,953	448,995	2,077,323	2,077,979
Oat Products (inc. Oatmeal) cwts.	2,335	1,513	15,814	9,784	2,652	2,663	25,835	29,032
Potatoes ... ... tons	139	619	1,504	2,545	*5,264	*7,506	*76,372	*124,368
Poultry ... ... cwts.	13	182	1,136	1,284	10,866	9,653	96,952	99,848
Grass Seeds ... ... cwts.	143	750	6,755	13,723	12,439	13,136	207,056	238,270
Cream ... ... galls.	——	——	——	——	†22,970	†30,246	†131,311	†133,028

* These figures represent the quantities of potatoes inspected by the Ministry of Agriculture for shipment.

† These figures are compiled from the Monthly Trading Returns supplied by Creameries in Northern Ireland.

‡ These figures do not include direct trade with places abroad.

Table showing the numbers of Live Stock (1) exposed for sale, and (2) sold at 22 fairs in Northern Ireland during the months of July and June, 1939, and July, 1938.

Description of Live Stock	July, 1939.		June, 1939.		July, 1938.	
	Number exposed for sale.	Number sold	Number exposed for sale	Number sold	Number exposed for sale	Number sold
Store Cattle ...	6,771	4,475	8,627	5,471	6,997	3,893
Fat Cattle ...	1,268	1,160	1,225	1,067	1,262	1,143
Dairy Cattle ...	1,228	1,031	1,343	933	1,378	961
Sheep	245	97	476	232	276	164
Lambs	1,848	1,424	1,243	932	2,261	1,902
Young Pigs ...	3,232	2,354	3,924	2,931	3,396	2,649

12th August, 1939.

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